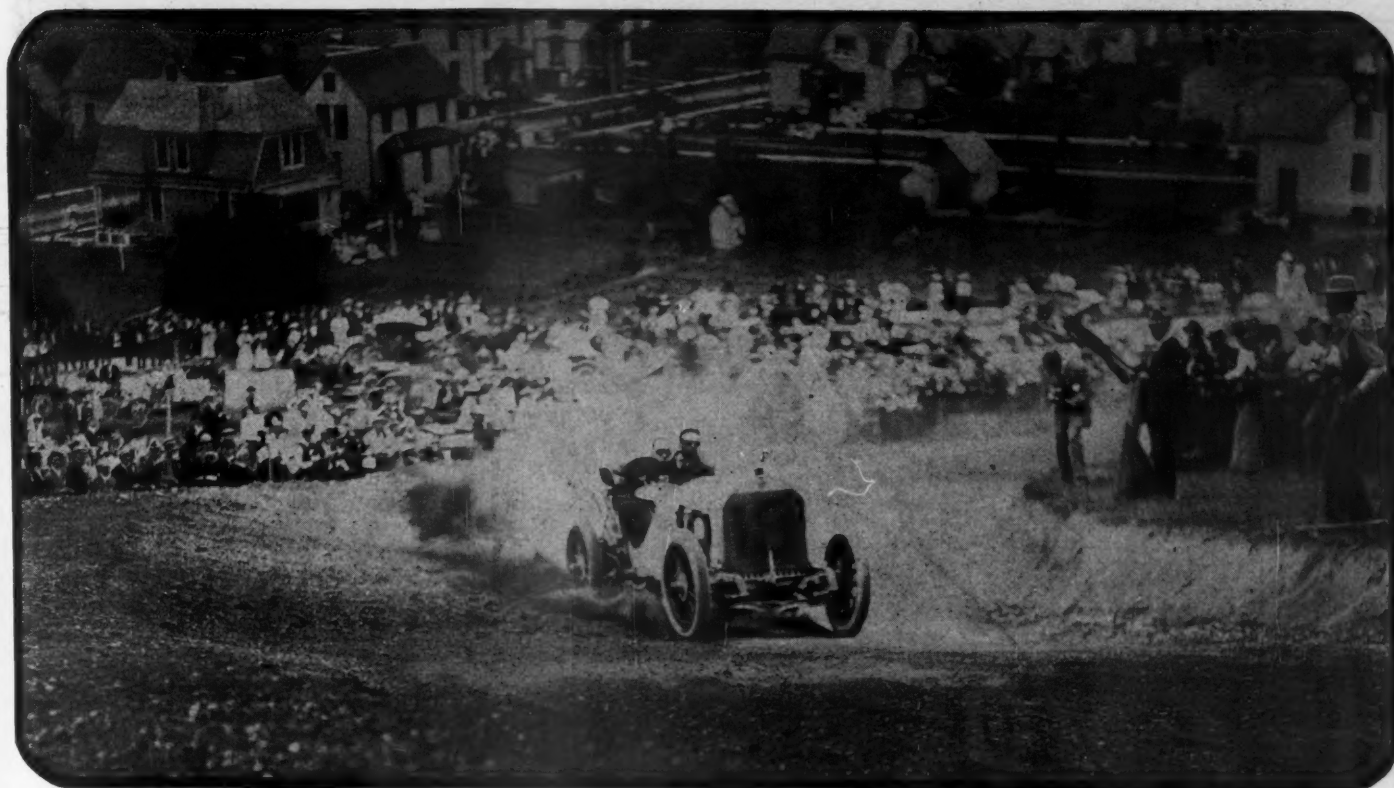


# MOTOR AGE



HEARNE IN 120 BENZ CLIMBING ALGONQUIN HILL IN RECORD TIME

## First National Climb at Algonquin

Chicago Motor Club Successfully Conducts Blue-Ribbon Hill Event for the American Automobile Association in Which the Benz, Ford, National, Case and Others Distinguish Themselves by Speed on Grades

### ALGONQUIN WINNERS

#### CLASS A, \$800 AND UNDER

| Driver  | Car  |
|---------|------|
| Lanahan | Ford |

#### CLASS A, \$801-\$1,200

|       |         |
|-------|---------|
| Bauer | Oakland |
|-------|---------|

#### CLASS A, \$1,201-\$1,600

|       |         |
|-------|---------|
| Bauer | Oakland |
|-------|---------|

#### CLASS A, \$1,601-\$2,000

|        |       |
|--------|-------|
| Cooney | Vette |
|--------|-------|

#### CLASS A, \$2,001-\$3,000

|      |          |
|------|----------|
| Seck | National |
|------|----------|

#### CLASS B, 160 INCHES AND UNDER

|         |        |
|---------|--------|
| Meddock | Empire |
|---------|--------|

#### CLASS B, 161-230 INCHES

|            |        |
|------------|--------|
| M. Roberts | Abbott |
|------------|--------|

#### CLASS B, 231-300 INCHES

|            |        |
|------------|--------|
| Monckmeyer | Staver |
|------------|--------|

#### CLASS B, 301-450 INCHES

|      |          |
|------|----------|
| Seck | National |
|------|----------|

#### CLASS B, 451-600 INCHES

|        |        |
|--------|--------|
| Morris | Falcar |
|--------|--------|

### Fastest Times

**Algonquin Hill—Hearne, Benz, :16 3-5, breaking record of :17 2-5.**

**Phillips Hill—Kulick, Ford Special, :28 1-5; record, :28.**

CHICAGO, June 9—The first hill-climb ever designated as a national event by the American Automobile Association was successfully run off yesterday by the Chicago Motor Club at Algonquin, it being the sixth renewal of that famous classic, by the local organization.

### ALGONQUIN WINNERS

#### CLASS E, 300 INCHES AND UNDER

| Driver       | Car  |
|--------------|------|
| Jagersburger | Case |

#### CLASS E, 600 INCHES AND UNDER

|      |          |
|------|----------|
| Seck | National |
|------|----------|

#### CLASS C, 161-230 INCHES

|         |      |
|---------|------|
| Gruener | Ford |
|---------|------|

#### CLASS C, 231-300 INCHES

|              |      |
|--------------|------|
| Jagersburger | Case |
|--------------|------|

#### CLASS C, 301-450 INCHES

|        |      |
|--------|------|
| Kulick | Ford |
|--------|------|

#### CLASS D, FREE-FOR-ALL

|        |      |
|--------|------|
| Hearne | Benz |
|--------|------|

#### FORMULA RESULTS

#### CLASS A, \$801-\$1,200

|       |         |
|-------|---------|
| Bauer | Oakland |
|-------|---------|

#### CLASS A, \$1,201-\$1,600

|       |         |
|-------|---------|
| Bauer | Oakland |
|-------|---------|

#### CLASS A, \$1,601-\$2,000

|        |       |
|--------|-------|
| Cooney | Vette |
|--------|-------|

#### CLASS A, \$2,001-\$3,000

|      |          |
|------|----------|
| Seck | National |
|------|----------|

# Cars That Starred at Algonquin



MONCKMEIER IN THE STAVER-CHICAGO, WINNER 231-300 CLASS, CLASS B



SOUBIRAN IN THE SIMPLEX, SECOND IN FREE-FOR-ALL



MORRIS IN THE FALCAR, WINNER 451-600 CLASS, CLASS B

No event of its sort ever was run off more smoothly than this one. The field itself was of considerable size, there being sixty-four entries, of which number only a very few were scratched. The climbs were made without loss of time, and the spectators were kept in good humor from start to finish. The morning climb was run off in 55 minutes, which shows the perfection of the organization of the event. No accidents marred the day, the spectators were orderly and kept off the course, and interest in the contest was keen because of the fast time that was made. The record on the new hill

was smashed in the morning climb, and in the afternoon the star performer came within  $\frac{1}{8}$  second of the old mark.

It was a day full of sensations, with the famous Algonquin cup going to the driver who had been picked to win it, Eddie Hearne, in the 120-horsepower Benz. However, it was no walk-over for the German car, which had to step lively in order to keep out of the way of some of the smaller ones. In fact so keen was the competition that had it not been for Hearne's margin of the morning he would have lost the trophy, for in the afternoon's scramble he

was defeated by Kulick in the Ford special.

Honors were well divided among the different makes of cars. The Benz got the lion's share through winning the free-for-all, and the Algonquin cup, the latter being the time prize of the meet and going to the car making the fastest time regardless of class. The Ford distinguished itself by being winner of three class events and runner up to the Benz in the battle for the Algonquin cup. In addition to that Kulick made the fastest time on Phillips hill and proved to be the sensation of the day because of the unexpected speed of the special car which he was driving.

## Many Good Performances

The National won four classes, but only in one of them was there any competition. That wasn't the National's fault, of course, and the car made a record for consistency that was one of the features of the day. By the clever work of Seek, its driver, it tied with Kulick for the honor of being runner-up to Hearne in the climb for the big cup. The Oakland also won four firsts, but all of them were walkovers and two of them came in the formula section. The Case did remarkably well by capturing two of the classes, in one of which Jagersburger met fierce competition. This German driver also excelled in that on the morning hill he tied the old record, while in the afternoon he was thrown off his stride by running off the course near the top, just enough to destroy the good chance he had of beating Hearne for the time trophy.

The Velie, Staver, Empire and Abbott-Detroit were other class winners. Some of these came in walkovers caused by the failure of the classes to fill or by withdrawals.

## Two Hills Used for Climb

Little change from past practice was made in the conduct of the meet. The two hills were used as before, the new grade, called the Algonquin hill in honor of the town, was used for the morning event. This is the hill that was built especially for the Chicago Motor Club and which is remarkable in that it is the only specially-built hill for motoring purposes to be found in this country. It is 1,000 feet in length with one turn half way up, and 26 per cent grade at its steepest point. It proved so formidable last year that this time the Chicago Motor Club straightened out the turn to a certain extent, which made it somewhat easier to negotiate. Last year several of the cars stalled on the hill because of its steepness and the awkwardness of the turn, but yesterday every car got up without much trouble.

The afternoon climb was held on Phillips hill, a long sloping grade  $\frac{1}{2}$  mile in length with an average grade of 12 percent, which is capable of a speed of better than a mile a minute. Last year this hill was negotiated from a standing start, but this robbed the climb of considerable interest because of the slower speed, so this year the club made it a flying start on both grades. Phillips hill was improved for this year's climb by cutting 8 feet into the bank at the turn at the top, which probably is one of the



reasons such good time was made. Both grades were well oiled and in addition wire fencing on both sides of the road from top to bottom of both grades kept the spectators out of harm's way.

#### Meet Well Handled

The conduct of this hill meet cannot be criticized from any standpoint. Chairman Gregory of the contest committee had his organization so perfected that everything went off without a hitch. Electrical timing was used and the instrument was handled by J. P. Frisby, chief timer. So well did the instruments work that only twice during the day was it necessary to send cars down for another trial. Each time this was caused by some one accidentally stepping on the wire stretched across the road.

Of course, the chief prize of the day was the Algonquin cup, a trophy which was put up 4 years ago by the town itself. It is a perpetual challenge cup and goes to the car making the fastest time on the two hills, regardless of class. Eddie Hearne in the 120 horsepower Benz won it because his total time for the two hills made in the free-for-all was the best of the day. Kulick tied for second in this category because of his fast work in the 301-450 class in class C, while Seek in the National was tied for second through his :48% made in division 5E in class E. Jagersburger's Case had a rating of :48%, which was secured in the 231-300 class in class C.

The morning climb left four men in position as contenders for the cup. Hearne was leading by virtue of his :16%, which is a new record for the short hill, but close behind him was Seek in the National and Jagersburger in the Case, each with :17%, which ties the old record made a year ago by Hearne in a small Benz. Kulick in the Ford, although he had made only :20 in the morning, was considered a factor, because the practice had developed that the special could go up Phillips hill as fast as any of the cars in the meet. As results show, the dopesters were not far out of the reckoning.

The detailed story of the time is interesting. There were five events scheduled in class A, which was run under a price classification; five in class B under a piston classification; two in class E, one for 300 inches and under and the other for 600 and under; one in class D, a free-for-all, in which was the star climb of the day; and three in class C, piston classification. The club killed two birds with one stone in class A by making it a double event and including its formula. The same climb in this class counted twice, once on a time basis and the other on a handicap basis. The formula contest attracted only five cars and only in one class was there any competition.

#### Scratches and Changes

There were few changes in the original program, the two Empires were taken out of the \$800 to \$1,200 class A and put into the 160 and under class in class B. The No. 11 McFarlan in the \$2,000-\$3,000 class A, the No. 15 Velie in the 161-230 class in class B, and the No. 27 Simplex in the 601-750 class in class B were not eligible

## Cars In the Limelight at Algonquin



STICKNEY IN THE VELIE, WHICH PERFORMED WELL



ROBERTS IN THE ABBOTT-DETROIT, WINNER 161-230 CLASS, CLASS B



ANDERSON IN THE EMPIRE IN 160 AND UNDER CLASS

in that section because those particular models had not been registered in the A. A. A. The Velie, however, was switched to the non-stock section and ran in the 161-230 class. The Jeffkins Velie was withdrawn from the meet because of a broken crankshaft sustained in practice, while Fritsch's Ohio was pulled out because of ignition trouble. Outside of these three changes the original card stood.

Probably 2,000 people were present when the morning climbs started at 10 o'clock, the first event seeing three Ford's battling for the honors in the small division of class

A. With great regularity the cars went up the hill and no excitement developed until the 301-450 class of class B, when Seek in the National went up in :17%, which tied the old record. Then the crowd sat up and began to take notice. The time continued to improve as the larger cars came up, and when the free-for-all was reached considerable excitement was aroused by the sensational climb of Hearne in the Benz, who went up in :16%, which was a cut of 1/2 second off the record. Kulick in the Ford special, a new creation of Henry Ford's with a 4% by 5 1/2 motor, instead of the

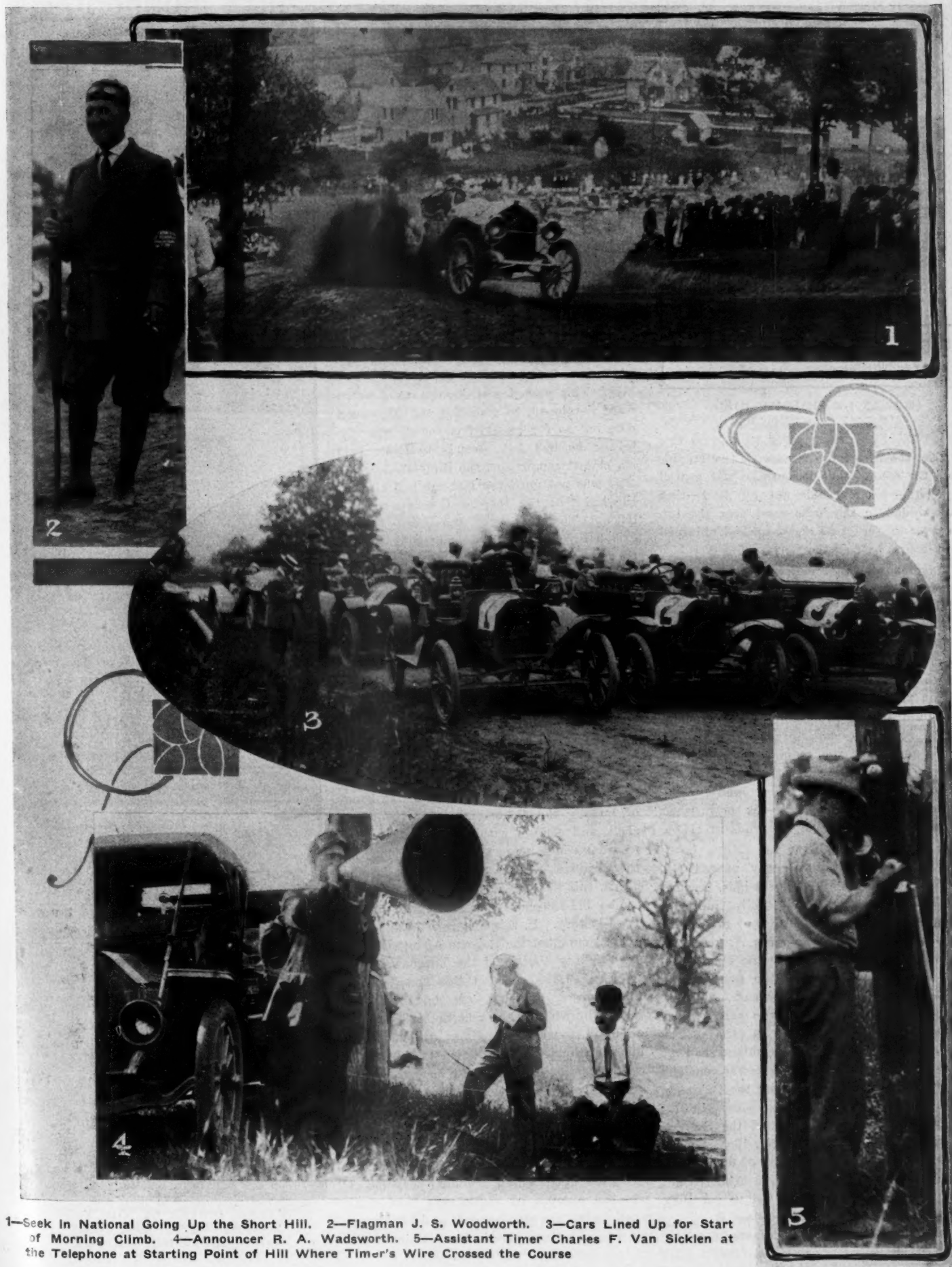
# Snapshots at Algonquin Hill-Climb



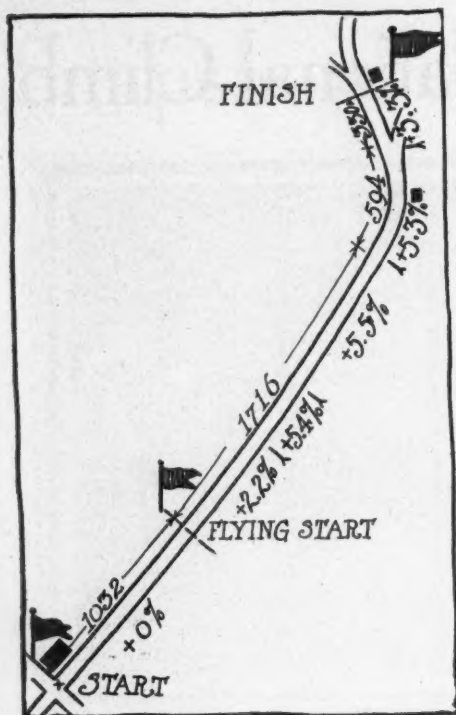
1—Kulick in the Ford Climbing Morning Hill. 2—Starter John G. De Long. 3—Chief Timer J. P. Frisby and His Electrical Outfit. 4—Cars Parked During Noon Intermission. 5—Charles E. Gregory, Chairman Chicago Motor Club Contest Committee and Clerk of Course



# Events and Personages at National Climb



1—Climb In National Going Up the Short Hill. 2—Flagman J. S. Woodworth. 3—Cars Lined Up for Start of Morning Climb. 4—Announcer R. A. Wadsworth. 5—Assistant Timer Charles F. Van Sicklen at the Telephone at Starting Point of Hill Where Timer's Wire Crossed the Course



PLAN OF PHILLIPS HILL

stock 3¾ by 4, experienced trouble on this grade, the first time because of tire trouble and the second time because he was geared too high—his rear axle was 1½ to 1—that he skidded in the loose sand near the top because of the great speed he had obtained in the first half of the journey.

Jagersburger in the Case became an unexpected cup contender because of the second chance given him by the referee. When he lined up for the first time in the 231-300 class in class C he was held at the tape for 5 minutes, which resulted in two fouled spark plugs, and the result was that he went up on two cylinders and :28 was the best he could do. A protest to the referee resulted in the decision to give him another trial, and after the regular morning card had been finished the German was given the word. That there was good ground for the demand for the second trial was shown when Jagersburger negotiated the grade in :17%.

#### The Afternoon Climb

The afternoon climb really proved the more interesting of the two sessions, because the long smooth grade on Phillips hill permitted of great speed. The first event, the \$800 and under class in class A, returned as winner M. J. Lanahan in the Ford, who had enough margin from the morning to beat out his team mate Gruener. Kulick was third, although he made the fastest time in the afternoon. In the \$801-\$1,200 class Bauer in the Oakland had a walkover with the 30 horsepower model. He also had no opposition with the Oakland 40 in the \$1,201-\$1,600 class. In the \$1,601-\$2,000 class the Velie defeated the Staver by quite a margin. Seek in No. 10 National had a walkover in the \$2,001 to \$3,000 class, while Mortimer Roberts in the Abbott-Detroit only had to climb the hill to get the award in the 161-230 class in class B.

Monekmeier in the Staver defeated a good

field in the 231-300 class in class B, in which the Cole, Falcar and Moon also were represented. Seek in the National had an easy time winning the 301-450 class, while two Falcars ran alone in the 451-600 class. The two class E events came next. The under 300 class brought out the largest field of the day. In this the two Case cars ran nip and tuck and Jagersburger defeated his team mate Strang by ½ second. Seek had walkover in the other half of this class.

#### The Fast Free-for-All

This brought the card up to the free-for-all, in which were contesting the Hearne Benz, the Seek National, the Soubiran Simplex, the Kulick Ford and the two Velies with Cooney and Stickney driving. A great interest was centered in this, because it was expected that from this class would come the winner of the Algonquin cup. So it proved. Hearne with the lead he had gained in the morning thought he had plenty of margin, and in his climb of Phillips hill he shut off at three different points, with the result that he flashed across the tape in :30%, which gave him a total of :47% for the two hills. This proved just enough, as it afterward developed, to give him the Algonquin cup, but so far as the free-for-all was concerned he had 1¼ seconds to spare over his closest competitor, the Simplex.

It was not until the last car had climbed the hill that the fate of the cup was decided. That car was the Ford special, driven by Kulick, which had :20% for the morning, which was not so far behind Hearne's :16% as to put the Ford man out of the running for the cup. Kulick in the free-for-all had gone up in :29%, which was the fastest time of the day up to then, and he still had one more chance. With the :20% in the morning in the 301-450 class in class C, he could win the cup by smashing the Phillips hill record. He made a noble try and did :28% in his last trial, but this wasn't quite enough to give him the coveted honor, and the big mug went to Hearne by the margin of 1 second. Kulick, however, was well content, for he had the honor of making the fastest climb of the afternoon, and coming within ½ second of the record made 2 years ago by Len Zengle in the Chadwick six. Kulick had enough margin in this 301-450 class to win it easily.

The 161-230 class in class C was another Ford victory. In this Gruener in the 3¾ by 4 Ford defeated the Roberts Abbott-Detroit, the Stickney Velie and the Turgeon Henry. In the 231-300 class in this same section Jagersburger in the Case added to his laurels by winning the remarkably fast time of :48% for the two climbs, which ranked him fourth in the battle for the Algonquin cup. In this section there competed two other Cases, two Falcars, a Cole, Moon and Ohio, so it will be seen that Jagersburger had plenty of competition.

#### Performances of Stock Cars

One of the features of the Algonquin hill-climb upon which comment was heard was the number of stock cars that competed in the non-stock events and the showing made by these cars in competition with

## Some Algonquin Star Drivers



HEARNE, DRIVER OF THE BENZ  
JAGERSBURGER, CASE PILOT  
SOUBIRAN IN THE SIMPLEX



# Winners on Algonquin Hills



KULICK, DRIVER OF FORD  
SEEK IN THE NATIONAL  
COONEY, A VELIE DRIVER

## EQUIPMENT OF CARS COMPETING AT ALGONQUIN

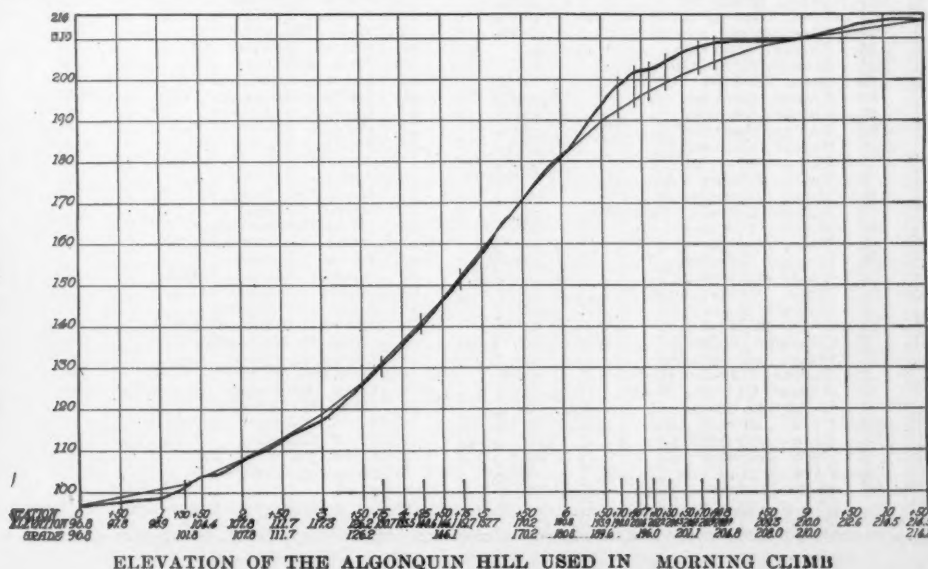
| No. | Car      | Magneto   | Carbureter | Tires        | Weight of Car |
|-----|----------|-----------|------------|--------------|---------------|
| 1   | Ford     | Ford      | Kingston   | Firestone    | 1,290         |
| 2   | Ford     | Ford      | Kingston   | Firestone    | 1,380         |
| 3   | Ford     | Ford      | Kingston   | Firestone    | 1,380         |
| 4   | Oakland  | Remy      | Schebler   | Goodyear     | 1,960         |
| 5   | Empire   | Eisemann  | Schebler   | Republic     | 1,580         |
| 6   | Empire   | Eisemann  | Schebler   | Pennsylvania | 1,700         |
| 7   | Oakland  | Remy      | Oakland    | Goodyear     | 2,500         |
| 8   | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,730         |
| 9   | Staver   | Spiltdorf | Schebler   | Firestone    | 2,910         |
| 10  | National | Spiltdorf | Schebler   | Diamond      | 3,248         |
| 12  | Abbott   | Spiltdorf | Schebler   | Michelin     |               |
| 14  | Abbott   | Bosch     | Mayer      | Firestone    | 1,750         |
| 15  | Velie    | Spiltdorf | Stromberg  | Firestone    | 1,670         |
| 16  | Cole     | Bosch     | Schebler   | Firestone    | 2,250         |
| 17  | Falcar   | Bosch     | Rayfield   | Michelin     | 2,230         |
| 18  | Falcar   | Remy      | Rayfield   | Michelin     | 2,210         |
| 19  | Moon     | Bosch     | Schebler   | Firestone    | 2,250         |
| 20  | Staver   | Bosch     | Schebler   | Swinehart    | 2,100         |
| 21  | Staver   | Bosch     | Schebler   | Firestone    | 2,070         |
| 22  | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,170         |
| 23  | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,150         |
| 24  | National | Spiltdorf | Schebler   | Michelin     | 2,630         |
| 25  | Falcar   | Bosch     | Rayfield   | Michelin     | 2,230         |
| 26  | Falcar   | Remy      | Rayfield   | Michelin     | 2,210         |
| 28  | Case     | Mea       | Rayfield   | Michelin     | 2,320         |
| 29  | Falcar   | Bosch     | Rayfield   | Michelin     | 2,230         |
| 30  | Falcar   | Remy      | Rayfield   | Michelin     | 2,210         |
| 31  | Moon     | Bosch     | Schebler   | Firestone    | 2,250         |
| 33  | Ohio     | Spiltdorf | Schebler   | Michelin     | 2,380         |
| 34  | Staver   | Bosch     | Schebler   | Firestone    | 2,070         |
| 35  | Staver   | Bosch     | Schebler   | Swinehart    | 2,100         |
| 36  | Henry    | Spiltdorf | Rayfield   | Empire       | 1,840         |
| 37  | Case     | Mea       | Rayfield   | Michelin     | 2,250         |
| 38  | National | Spiltdorf | Schebler   | Michelin     | 2,630         |
| 40  | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,150         |
| 41  | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,170         |
| 42  | Ford     |           |            |              |               |
| 43  | Benz     | 2 Bosch   | Benz       | Michelin     |               |
| 45  | National | Spiltdorf | Schebler   | Michelin     | 2,630         |
| 46  | Simplex  | Bosch     | Simplex    | Continental  |               |
| 47  | Abbott   | Spiltdorf | Mayer      | Michelin     |               |
| 48  | Abbott   | Bosch     | Mayer      | Michelin     | 1,560         |
| 49  | Ford     | Ford      | Kingston   | Firestone    | 950           |
| 50  | Henry    | Spiltdorf | Rayfield   | Empire       | 1,840         |
| 51  | Case     | Mea       | Rayfield   | Michelin     | 7,250         |
| 52  | Case     | Mea       | Rayfield   | Michelin     |               |
| 53  | Falcar   | Bosch     | Rayfield   | Michelin     | 2,230         |
| 54  | Moon     | Bosch     | Schebler   | Firestone    | 2,250         |
| 55  | Falcar   | Remy      | Rayfield   | Michelin     | 2,210         |
| 56  | Ohio     | Spiltdorf | Schebler   | Michelin     | 2,380         |
| 57  | Case     | Mea       | Rayfield   | Michelin     | 2,320         |
| 58  | Cole     | Bosch     | Schebler   | Firestone    | 2,250         |
| 60  | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,150         |
| 61  | Velie    | Spiltdorf | Stromberg  | Firestone    | 2,170         |
| 63  | National | Spiltdorf | Schebler   | Michelin     | 2,630         |
| 64  | Ford     |           |            |              |               |

those which were not bound down to standard specifications. While only one of the stock cars won first place in any of the non-stock events, one or another of the standard cars showed among the first three in each. In the free-for-all division, obviously the fastest event of the day, Soubiran in his Simplex carried off second place, running second only to the powerful Benz which had a much greater piston displacement. The Simplex entrant is

strictly a stock car, although its excessive piston displacement precluded its participation in any of the regular stock events.

Comparison of the times made in all the events, regardless of class, shows that the National, another stock car, tied with the special Ford car for the second place, both requiring 1 second more time to climb the two hills than was taken by the Benz.

The one stock car to carry off first honors in the events that were open to all ma-



chines of the proper piston displacement was the winner of the division for cars under 230 cubic inches capacity. This was a standard Ford driven by Gruener, who had a lead of 3 seconds over his nearest competitor.

#### Some of the Specials

The special cars entered in the hill-climb were the Benz, the three Case cars, the two little Abbott-Detroits and the Ford racer. The Benz naturally attracted the most attention, not only because it was the only representative of foreign practice, but also on account of the beach records of its larger mate. It was eligible only for the free-for-all climb, as its cylinder capacity was nearly 725 cubic inches. In spite of the generally accepted European practice of long-stroke motors, the four cylinders of the Benz are nearly square, having a bore of 6.1 inches and a 6.2-inch stroke. The car was one of the heaviest of the starters. In the way of equipment, the regular Benz carburetor was used, and two Bosch magnetos supplied current for two independent ignition systems. The wheels were shod with Michelin tires. This was the most powerful car entered in any of the events.

#### FORMULA RESULTS

Formula: Piston displacement, multiplied by time in seconds, divided by weight.

| Car and<br>Driver                                | Bore  | Stroke | —Percent— |       |       |
|--|-------|--------|-----------|-------|-------|
|  |       |        | A. M.     | P. M. | Total |
| CLASS A, STOCK, DIVISION 2 A,<br>\$801-\$1,200   |       |        |           |       |       |
| Oakland, Bauer...                                | 4     | 4      | 2.49      | 3.63  | 6.12  |
| CLASS A, STOCK, DIVISION 3 A,<br>\$1,201-\$1,600 |       |        |           |       |       |
| Oakland, Bauer...                                | 4 1/2 | 5      | 2.74      | 4.77  | 7.51  |
| CLASS A, STOCK, DIVISION 4 A,<br>\$1,601-\$2,000 |       |        |           |       |       |
| Velle, Cooney....                                | 4 1/2 | 5 1/2  | 2.38      | 3.97  | 6.35  |
| Staver, Monck-<br>meyer                          | 4 1/2 | 5      | 2.77      | 4.42  | 7.19  |
| CLASS A, STOCK, DIVISION 5 A,<br>\$2,001-\$3,000 |       |        |           |       |       |
| National, Seek...                                | 5 1/4 | 5 1/4  | 2.42      | 4.28  | 6.70  |

The Case cars looked more like some antediluvian monsters than like modern motor cars. The fanciful decorations on their bonnets resembled the open jaws and sharp fangs of enormous crocodiles. All three cars were practically the same in construction, having 4 1/4 by 5-inch motors equipped with Rayfield carburetors and Mea magnetos. The Case car driven by Jagersburger weighed 2,250 pounds and

Strang's tipped the official scales at 70 pounds more. Jones' mount weighed about the same as its mates. All rode on Michelin tires.

#### The Little Abbotts

The smallest car that appeared and the lightest of the non-stock cars were the two little Abbott-Detroits. The most striking departure from the standard was in the tread, which was reduced from the usual 56 inches to 45 1/4 inches. In addition to this the wheels were much smaller than is the usual practice, being 30 inches in diameter. These changes resulted in a very easily propelled running gear, as was illustrated in a novel way at the start of the afternoon climb. When Roberts was forced to back up after overrunning the starting line, instead of restarting his motor he reached a hand down on each side of his seat and ran the car back by turning the wheels, much as an invalid propels himself in his wheeled chair.

Both motors are 4 1/8 by 4 1/4 inches in size and were fitted with Meyer carburetors. Michelin tires were used. Basle's car used a Splitdorf magneto, while the ignition of Roberts' machine was supplied by a Bosch magneto.

TABLE SHOWING RELATIVE TIME STANDING MORNING, AFTERNOON AND FINISH IN ALGONQUIN CLIMB

#### RELATIVE STANDING, MORNING TIME

| No | Car and driver          | Time    |
|----|-------------------------|---------|
| 43 | Benz, Hearne            | :16 3/4 |
| 51 | Case, Jagersburger      | :17 1/2 |
| 38 | National, Seek          | :17 3/4 |
| 24 | National, Seek          | :17 3/4 |
| 63 | National, Seek          | :17 3/4 |
| 46 | Simplex, Soubiran       | :17 3/4 |
| 37 | Case, Jagersburger      | :18     |
| 49 | Ford, Gruener           | :18     |
| 41 | Velle, Stickney         | :18     |
| 45 | National, Seek          | :18 1/2 |
| 22 | Velle, Stickney         | :18 3/4 |
| 61 | Velle, Stickney         | :19     |
| 28 | Case, Strang            | :19 1/2 |
| 20 | Staver, Monckmeyer      | :19 1/2 |
| 60 | Velle, Cooney           | :19 1/2 |
| 35 | Staver, Monckmeyer      | :19 1/2 |
| 10 | National, Seek          | :19 1/2 |
| 29 | Falcar, Morris          | :20     |
| 23 | Velle, Cooney           | :20     |
| 40 | Velle, Cooney           | :20     |
| 48 | Abbott-Detroit, Roberts | :20     |
| 53 | Falcar, Morris          | :20     |
| 64 | Ford, Kulick            | :20 1/2 |
| 34 | Staver, Robillard       | :20 1/2 |
| 47 | Abbott-Detroit, Basle   | :20 3/4 |
| 15 | Velle, Stickney         | :20 3/4 |
| 57 | Case, Strang            | :20 3/4 |
| 52 | Case, Jones             | :20 3/4 |
| 25 | Falcar, Morris          | :21     |
| 21 | Staver, Robillard       | :21     |
| 16 | Cole, Jenkins           | :21 1/2 |
| 30 | Falcar, Gelnow          | :21 1/2 |
| 18 | Falcar, Gelnow          | :21 1/2 |
| 55 | Falcar, Gelnow          | :22 1/2 |
| 26 | Falcar, Gelnow          | :22 3/4 |
| 17 | Falcar, Morris          | :22 3/4 |
| 8  | Velle, Cooney           | :22 3/4 |
| 19 | Moon, Heinemann         | :23     |
| 14 | Abbott-Detroit, Roberts | :23     |
| 50 | Henry, Turgeon          | :24     |
| 42 | Ford, Kulick            | :24     |
| 36 | Henry, Turgeon          | :24 1/2 |
| 33 | Ohio, Mathews           | :27 1/2 |
| 54 | Moon, Heinemann         | :27 3/4 |
| 5  | Empire, Anderson        | :27 3/4 |
| 56 | Ohio, Mathews           | :27 3/4 |
| 7  | Oakland, Bauer          | :25     |
| 31 | Moon, Heinemann         | :26     |
| 9  | Staver, Monckmeyer      | :26 3/4 |
| 12 | Abbott-Detroit, Basle   | :28     |
| 4  | Oakland, Bauer          | :29 1/2 |
| 2  | Ford, Lanahan           | :29 1/2 |
| 6  | Empire, Meddock         | :30 1/2 |
| 3  | Ford, Gruener           | :30 3/4 |
| 1  | Ford, Kulick            | :38 3/4 |
| 58 | Cole, Jenkins           | :55     |

#### RELATIVE STANDING, AFTERNOON TIME

| No | Car and driver          | Time    |
|----|-------------------------|---------|
| 64 | Ford, Kulick            | :28 1/2 |
| 42 | Ford, Kulick            | :29 1/2 |
| 38 | National, Seek          | :30 1/2 |
| 43 | Benz, Hearne            | :30 1/2 |
| 51 | Case, Jagersburger      | :31 1/2 |
| 24 | National, Seek          | :31 1/2 |
| 28 | Case, Strang            | :31 1/2 |
| 45 | National, Seek          | :31 1/2 |
| 46 | Simplex, Soubiran       | :31 1/2 |
| 57 | Case, Strang            | :31 3/4 |
| 37 | Case, Jagersburger      | :32 1/2 |
| 63 | National, Seek          | :32 1/2 |
| 49 | Ford, Gruener           | :32 1/2 |
| 22 | Velle, Stickney         | :33 1/2 |
| 41 | Velle, Stickney         | :33 1/2 |
| 61 | Velle, Stickney         | :33 1/2 |
| 60 | Velle, Cooney           | :33 1/2 |
| 20 | Staver, Monckmeyer      | :33 1/2 |
| 35 | Staver, Monckmeyer      | :33 1/2 |
| 40 | Velle, Cooney           | :33 1/2 |
| 48 | Abbott-Detroit, Basle   | :33 1/2 |
| 23 | Velle, Cooney           | :34     |
| 10 | National, Seek          | :35     |
| 52 | Case, Jones             | :35     |
| 16 | Cole, Jenkins           | :35 1/2 |
| 30 | Falcar, Gelnow          | :35 1/2 |
| 18 | Falcar, Gelnow          | :35 1/2 |
| 15 | Velle, Stickney         | :35 1/2 |
| 55 | Falcar, Gelnow          | :36     |
| 58 | Cole, Jenkins           | :36     |
| 34 | Staver, Robillard       | :36 1/2 |
| 26 | Falcar, Gelnow          | :36 1/2 |
| 21 | Staver, Robillard       | :36 1/2 |
| 25 | Falcar, Morris          | :36 1/2 |
| 29 | Falcar, Morris          | :36 1/2 |
| 14 | Abbott-Detroit, Roberts | :36 1/2 |
| 17 | Falcar, Morris          | :37     |
| 54 | Moon, Heinemann         | :37 1/2 |
| 8  | Velle, Cooney           | :37 3/4 |
| 19 | Moon, Heinemann         | :37 3/4 |
| 31 | Moon, Heinemann         | :38     |
| 53 | Falcar, Morris          | :38     |
| 47 | Abbott-Detroit, Basle   | :38 3/4 |
| 50 | Henry, Turgeon          | :40 3/4 |
| 36 | Henry, Turgeon          | :41 1/4 |
| 9  | Staver, Monckmeyer      | :42 1/2 |
| 6  | Empire, Meddock         | :42 3/4 |
| 4  | Oakland, Bauer          | :42 3/4 |
| 33 | Ohio, Mathews           | :44 3/4 |
| 56 | Ohio, Mathews           | :47 3/4 |
| 3  | Ford, Kulick            | :49 3/4 |
| 2  | Ford, Gruener           | :50 3/4 |
| 1  | Ford, Lanahan           | :51 3/4 |
| 5  | Empire, Anderson        | :53     |

#### RELATIVE STANDING ON TOTAL TIME

| No | Car       | A.M. Time | P.M. Time | Total Time |
|----|-----------|-----------|-----------|------------|
| 43 | Benz      | :16 3/4   | :30 1/2   | :47 1/4    |
| 64 | Ford      | :20 1/2   | :28 1/2   | :48 3/4    |
| 38 | National  | :17 3/4   | :30 1/2   | :48 3/4    |
| 51 | Case      | :17 3/4   | :31 1/2   | :49 1/4    |
| 24 | National  | :17 3/4   | :31 1/2   | :49 1/4    |
| 46 | Simplex   | :17 3/4   | :31 1/2   | :49 1/4    |
| 45 | National  | :18 1/2   | :31 1/2   | :49 3/4    |
| 63 | National  | :17 3/4   | :32 1/2   | :50 1/4    |
| 37 | Case      | :18       | :32 1/2   | :50 1/2    |
| 28 | Case      | :19 1/2   | :31 1/2   | :50 3/4    |
| 49 | Ford      | :18       | :32 1/2   | :50 3/4    |
| 41 | Velle     | :18       | :33 1/2   | :51 1/2    |
| 22 | Velle     | :18 1/2   | :33 1/2   | :51 3/4    |
| 57 | Case      | :20 3/4   | :31 1/2   | :52 1/4    |
| 61 | Velle     | :19       | :33 1/2   | :52 1/2    |
| 20 | Staver    | :19 1/2   | :33 1/2   | :53 1/4    |
| 42 | Ford      | :24       | :29 1/2   | :53 1/2    |
| 60 | Velle     | :19 1/2   | :33 1/2   | :53 1/2    |
| 35 | Staver    | :19 1/2   | :33 1/2   | :53 1/2    |
| 48 | Abbott-D. | :20       | :33 1/2   | :53 1/2    |
| 40 | Velle     | :20       | :33 1/2   | :53 1/2    |
| 23 | Velle     | :20       | :34       | :54        |
| 10 | National  | :19 1/2   | :35       | :54 1/2    |
| 52 | Case      | :20 3/4   | :35       | :55 3/4    |
| 34 | Staver    | :20 1/2   | :36 1/2   | :56 1/2    |
| 15 | Velle     | :20 3/4   | :35 1/2   | :56 1/2    |
| 16 | Cole      | :21 1/2   | :35 1/2   | :56 3/4    |
| 29 | Falcar    | :20       | :36 3/4   | :56 3/4    |
| 30 | Falcar    | :21 1/2   | :35 1/2   | :57        |
| 21 | Staver    | :21       | :36 1/2   | :57 1/2    |
| 18 | Falcar    | :21 1/2   | :35 1/2   | :57 1/2    |
| 25 | Falcar    | :21       | :36 3/4   | :57 3/4    |
| 53 | Falcar    | :20       | :38       | :58        |
| 55 | Falcar    | :22 1/2   | :36       | :58 1/2    |
| 26 | Falcar    | :22 3/4   | :36 1/2   | :59 1/4    |
| 47 | Abbott-D. | :20 3/4   | :38 3/4   | :59 1/2    |
| 17 | Falcar    | :22 3/4   | :37       | :59 3/4    |
| 14 | Abbott-D. | :23       | :36 1/2   | :59 3/4    |
| 8  | Velle     | :22 3/4   | :37 1/2   | :1:00 1/4  |
| 19 | Moon      | :23       | :37 1/2   | :1:00 3/4  |
| 31 | Moon      | :26       | :38       | :1:04      |
| 50 | Henry     | :24       | :40 3/4   | :1:04 3/4  |
| 54 | Moon      | :27 3/4   | :37 1/2   | :1:04 3/4  |
| 36 | Henry     | :24 1/2   | :41 1/4   | :1:06      |
| 7  | Oakland   | :26 3/4   | :43 1/2   | :1:08 3/4  |
| 9  | Staver    | :26 3/4   | :42 3/4   | :1:09      |
| 33 | Ohio      | :27 1/2   | :44 3/4   | :1:11 1/4  |
| 6  | Empire    | :30 1/2   | :42 3/4   | :1:12 1/2  |
| 4  | Oakland   | :29 1/2   | :42 3/4   | :1:11 3/4  |
| 56 | Ohio      | :27 3/4   | :47 3/4   | :1:15 1/2  |
| 3  | Ford      | :29 1/2   | :51 1/2   | :1:20 3/4  |
| 2  | Empire    | :27 3/4   | :53       | :1:20 3/4  |
| 1  | Ford      | :30 3/4   | :50 3/4   | :1:21      |
| 3  | Ford      | :38 3/4   | :49 3/4   | :1:28 1/4  |
| 58 | Cole      | :55       | :36       | :1:31      |



## RESULTS OF THE NATIONAL HILL-CLIMB OF CHICAGO MOTOR CLUB, AT ALGONQUIN, JUNE 8

| No.   | Car            | Driver       | Entrant                   | Bore    | Stroke  | Piston Displacement | A. M. Time | A. M. P. H. | A. M. Position | P. M. Time | P. M. P. H. | P. M. Position | Total Time |
|---|----------------|--------------|---------------------------|---------|---------|---------------------|------------|-------------|----------------|------------|-------------|----------------|------------|
| CLASS A, STOCK CARS, DIVISION 1 A, \$800 AND UNDER            |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 2   | Ford           | Lanahan      | Ford Motor Co.            | 3 3/4   | 4       | 176.7               | :29 1/5    | 23.40       | 1              | :51 1/2    | 35.02       | 3              | 1:20 1/2   |
| 1   | Ford           | Gruener      | Ford Motor Co.            | 3 3/4   | 4       | 176.7               | :30 3/5    | 22.40       | 2              | :50 3/5    | 35.71       | 2              | 1:21       |
| 3   | Ford           | Kulick       | Ford Motor Co.            | 3 3/4   | 4       | 176.7               | :38 1/5    | 17.75       | 3              | :49 3/5    | 36.29       | 1              | 1:28 1/2   |
| CLASS A, STOCK CARS, DIVISION 2 A, \$801 TO \$1,200           |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 4   | Oakland        | Bauer        | Oakland Motor Car Co.     | 4       | 4       | 201.1               | :29 1/5    | 23.40       | 1              | :42 1/2    | 42.25       | 1              | 1:11 1/2   |
| CLASS A, STOCK CARS, DIVISION 3 A, \$1,201 TO \$1,600         |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 7   | Oakland        | Bauer        | Oakland Motor Car Co.     | 4 1/2   | 5       | 318.1               | :25        | 27.40       | 1              | :43 1/2    | 41.47       | 1              | 1:08 1/2   |
| CLASS A, STOCK CARS, DIVISION 4 A, \$1,601 TO \$2,000         |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 8   | Vellie         | Cooney       | Vellie Motor Vehicle Co.  | 4 1/2   | 5 1/4   | 334                 | :22 1/2    | 30.30       | 1              | :37 1/2    | 47.82       | 1              | 1:00 1/2   |
| 9   | Staver         | Monckmeyer   | Staver Carriage Co.       | 4 1/2   | 5       | 318.1               | :26 1/2    | 25.80       | 2              | :42 1/2    | 42.22       | 2              | 1:09       |
| CLASS A, STOCK CARS, DIVISION 5 A, \$2,001 TO \$3,000         |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 10  | National       | Seek         | J. H. Seek                | 5       | 5 11-16 | 447                 | :19 1/2    | 34.60       | 1              | :35        | 51.42       | 1              | :54 1/2    |
| CLASS B, STOCK CHASSIS, DIVISION 1 B, 160 INCHES AND UNDER.   |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 6   | Empire         | Meddock      | F. R. Jenkins             | 3 1/2   | 4       | 153.9               | :30 1/5    | 22.60       | 2              | :42 1/2    | 42.25       | 1              | 1:12 1/2   |
| 5   | Empire         | Anderson     | C. E. Anderson            | 3 1/2   | 4       | 153.9               | :27 1/2    | 24.60       | 1              | :53        | 33.96       | 2              | 1:20 1/2   |
| CLASS B, STOCK CHASSIS, DIVISION 2 B, 161 TO 230 INCHES       |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 14  | Abbott-Detroit | Mort Roberts | Abbott Motor Co.          | 4       | 4 1/4   | 213.6               | :23        | 29.80       | 1              | :36 1/2    | 48.91       | 1              | :59 1/2    |
| 12  | Abbott-Detroit | M. Basle     | Abbott Motor Co.          | 4       | 4 1/4   | 213.6               | :28        | 24.00       | 2              | .....      | .....       | .....          | .....      |
| CLASS B, STOCK CHASSIS, DIVISION 3 B, 231 TO 300 INCHES       |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 20  | Staver-Chicago | Monckmeyer   | Staver Carriage Co.       | 4 3/8   | 5       | 300.7               | :19 1/2    | 35.20       | 1              | :33 1/2    | 53.25       | 1              | :53 1/2    |
| 16  | Cole           | Jenkins      | Cole Motor Car Co.        | 4 1/2   | 4 1/2   | 286.3               | :21 1/2    | 21.10       | 3              | :35 1/2    | 50.84       | 2              | :56 1/2    |
| 18  | Falcar         | Gelnaw       | Fal Motor Co.             | 4 1/2   | 5 1/4   | 297.8               | :21 1/2    | 31.40       | 4              | :35 1/2    | 50.56       | 3              | :57 1/2    |
| 21  | Staver         | Robillard    | Staver Carriage Co.       | 4 3/8   | 5 1/4   | 315.7               | :21        | 32.60       | 2              | :36 1/2    | 49.45       | 4              | :57 1/2    |
| 17  | Falcar         | Morris       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :22 1/2    | 30.60       | 5              | :37        | 48.65       | 5              | :59 1/2    |
| 19  | Moon           | Heinemann    | Moon Motor Car Co.        | 4 19-32 | 4 1/2   | 300.4               | :23        | 29.80       | 6              | :37 1/2    | 47.82       | 6              | 1:00 1/2   |
| CLASS B, STOCK CHASSIS, DIVISION 4 B, 301 TO 450 INCHES       |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 24  | National       | Seek         | J. H. Seek                | 5       | 5 11-16 | 447                 | :17 1/2    | 39.40       | 1              | :31 1/2    | 57.69       | 1              | :48 1/2    |
| 22  | Vellie         | Stickney     | Vellie Motor Vehicle Co.  | 4 1/2   | 5 1/4   | 334                 | :18 1/2    | 37.20       | 2              | :33 1/2    | 54.22       | 2              | :51 1/2    |
| 23  | Vellie         | Cooney       | Vellie Motor Vehicle Co.  | 4 1/2   | 5 1/4   | 334                 | :20        | 34.20       | 3              | :34        | 52.94       | 3              | :54        |
| CLASS B, STOCK CHASSIS, DIVISION 5 B, 451 TO 600 INCHES       |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 25  | Falcar         | Morris       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :21        | 32.60       | 1              | :36 1/2    | 49.18       | 2              | :57 1/2    |
| 26  | Falcar         | Gelnaw       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :22 1/2    | 30.30       | 1              | :36 1/2    | 49.72       | 1              | :58 1/2    |
| CLASS E, NONSTOCK CHASSIS, DIVISION 3 E, 300 INCHES AND UNDER |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 37  | Case           | Jagersburger | J. I. Case Co.            | 4 1/4   | 5       | 283.6               | :18        | 38.00       | 1              | :32 1/2    | 55.90       | 2              | :50 1/2    |
| 28  | Case           | Strang       | J. I. Case Co.            | 4 1/4   | 5       | 283.6               | :19 1/2    | 35.60       | 2              | :31 1/2    | 57.69       | 1              | :50 1/2    |
| 35  | Staver-Chicago | Monckmeyer   | Staver Carriage Co.       | 4 3/8   | 5       | 300.7               | :19 1/2    | 34.60       | 3              | :33 1/2    | 53.25       | 3              | :53 1/2    |
| 34  | Staver-Chicago | Robillard    | Staver Carriage Co.       | 4 3/8   | 5       | 300.7               | :20 1/2    | 33.90       | 5              | :36 1/2    | 49.72       | 5              | :56 1/2    |
| 29  | Falcar         | Morris       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :20        | 34.25       | 4              | :36 1/2    | 49.18       | 6              | :56 1/2    |
| 30  | Falcar         | Gelnaw       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :21 1/2    | 32.00       | 6              | :35 1/2    | 50.56       | 4              | :57        |
| 31  | Moon           | Heinemann    | Moon Motor Car Co.        | 4 19-32 | 4 1/2   | 300.4               | :26        | 26.30       | 8              | :38        | 47.36       | 7              | 1:04       |
| 36  | Henry          | Turgeon      | Henry Motor Car Co.       | 4       | 4 1/2   | 226.2               | :24 1/2    | 28.30       | 7              | :41 1/2    | 43.06       | 8              | 1:06       |
| 33  | Ohio           | Mathews      | Ohio Motor Car Co.        | 4 15-32 | 4 1/2   | 298.4               | :27 1/2    | 25.20       | 9              | :44 1/2    | 40.35       | 9              | 1:11 1/2   |
| CLASS E, NONSTOCK CHASSIS, DIVISION 5 E, 600 INCHES AND UNDER |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 38  | National       | Seek         | J. H. Seek                | 5       | 5 11-16 | 447                 | :17 1/2    | 38.90       | 1              | :30 1/2    | 58.44       | 1              | :48 1/2    |
| CLASS D, NONSTOCK CHASSIS, FREE-FOR-ALL                       |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 43  | Benz           | Hearne       | E. A. Hearne              | 6 1-10  | 6 2-10  | 724.8               | :16 1/2    | 41.25       | 1              | :30 1/2    | 58.44       | 2              | :47 1/2    |
| 46  | Simplex        | Soubiran     | G. F. Sulzberger          | 6 1-10  | 5 3/4   | 672.2               | :17 1/2    | 38.48       | 2              | :31 1/2    | 57.32       | 3              | :49 1/2    |
| 45  | National       | Seek         | J. H. Seek                | 5       | 5 11-16 | 447                 | :18 1/2    | 37.60       | 4              | :31 1/2    | 57.32       | 3              | :49 1/2    |
| 41  | Vellie         | Stickney     | Vellie Motor Vehicle Co.  | 4 1/2   | 5 1/4   | 334                 | :18        | 38.00       | 3              | :33 1/2    | 54.22       | 5              | :51 1/2    |
| 42  | Ford           | Kulick       | Ford Motor Co.            | 4 3/4   | 5 1/2   | 389.9               | :24        | 28.50       | 6              | :29 1/2    | 61.64       | 1              | :53 1/2    |
| 40  | Vellie         | Cooney       | Vellie Motor Vehicle Co.  | 4 1/2   | 5 1/4   | 334                 | :20        | 34.20       | 5              | :33 1/2    | 53.25       | 6              | :53 1/2    |
| CLASS C, NONSTOCK CHASSIS, DIVISION 2 C, 161 TO 230 INCHES    |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 49  | Ford           | Gruener      | Ford Motor Co.            | 3 3/4   | 4       | 176.7               | :18        | 38.00       | 1              | :32 1/2    | 54.87       | 1              | :50 1/2    |
| 48  | Abbott-Detroit | Roberts      | Abbott Motor Co.          | 4 1/8   | 4 1/4   | 227.2               | :20        | 34.20       | 2              | :33 1/2    | 53.25       | 2              | :53 1/2    |
| 15  | Vellie         | Stickney     | Vellie Motor Vehicle Co.  | 4       | 4       | 201.1               | :20 1/2    | 33.20       | 3              | :33 1/2    | 54.40       | 3              | :56 1/2    |
| 47  | Abbott-Detroit | M. Basle     | Abbott Motor Co.          | 4 1/8   | 4 1/4   | 227.2               | :20 1/2    | 33.20       | 4              | :38 1/2    | 46.60       | 4              | :59 1/2    |
| 50  | Henry          | Turgeon      | Henry Motor Car Sales Co. | 4       | 4 1/2   | 226.2               | :24        | 28.50       | 5              | :40 1/2    | 44.33       | 5              | 1:04 1/2   |
| CLASS C, NONSTOCK CHASSIS, DIVISION 4 C, 231 TO 300 INCHES    |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 51  | Case           | Jagersburger | J. I. Case Co.            | 4 1/4   | 5       | 283.6               | :17 1/2    | 39.40       | 1              | :31 1/2    | 57.69       | 1              | :48 1/2    |
| 57  | Case           | Strang       | J. I. Case Co.            | 4 1/4   | 5       | 283.6               | :20 1/2    | 33.20       | 3              | :31 1/2    | 56.95       | 2              | :52 1/2    |
| 52  | Case           | Jones        | J. I. Case Co.            | 4 1/4   | 5       | 283.6               | :20 1/2    | 33.20       | 3              | :35        | 51.42       | 3              | :55 1/2    |
| 53  | Falcar         | Morris       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :20        | 34.20       | 2              | :38        | 47.36       | 6              | :58        |
| 55  | Falcar         | Gelnaw       | Fal Motor Co.             | 4 1/4   | 5 1/4   | 297.8               | :22 1/2    | 30.80       | 4              | :36        | 50.00       | 4              | :58 1/2    |
| 54  | Moon           | Heinemann    | Moon Motor Car Co.        | 4 19-32 | 4 1/2   | 300.4               | :27 1/2    | 24.80       | 6              | :37 1/2    | 48.38       | 7              | 1:04 1/2   |
| 56  | Ohio           | Mathews      | Ohio Motor Car Co.        | 4 15-32 | 4 1/2   | 298.4               | :27 1/2    | 24.60       | 7              | :47 1/2    | 37.81       | 8              | 1:15 1/2   |
| 58  | Cole           | Jenkins      | Cole Motor Car Co.        | 4 1/2   | 4 1/2   | 286.3               | :25        | 12.50       | 8              | :36        | 50.00       | 4              | 1:31       |
| CLASS C, NONSTOCK CHASSIS, DIVISION 4 C, 301 TO 450 INCHES    |                |              |                           |         |         |                     |            |             |                |            |             |                |            |
| 64  | Ford           | Kulick       | Ford Motor Co.            | 4 3/4   | 5 1/2   | 289.9               | :20 1/2    | 33.90       | 4              | :28 1/2    | 63.83       | 1              | :48 1/2    |
| 63  | National       | Seek         | J. H. Seek                | 5       | 5 11-16 | 447                 | :17 1/2    | 38.90       | 1              | :32 1/2    | 55.90       | 2              | :49 1/2    |
| 61  | Vellie         | Stickney     | Vellie Motor Car Co.      | 4 1/2   | 5 1/4   | 334                 | :19        | 36.00       | 2              | :33 1/2    | 53.89       | 3              | :52 1/2    |
| 60  | Vellie         | Cooney       | Vellie Motor Car Co.      | 4 1/2   | 5 1/4   | 334                 | :19 1/2    | 34.60       | 3              | :33 1/2    | 53.57       | 4              | :53 1/2    |



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## A Road-Racing Benefit

**T**IME has proven that the benefits of the national stock chassis races last August did not all go to the winning cars but that the Elgin community and the motoring interests in general benefited by the races. The Elgin course was the first example in the Chicago territory of extensive oiling of country roads. Heretofore the public had read of oiled roads in New England and New York state, but it was a far-off rumor. An example at home is entirely different. The result is that this year there are already many miles of roads oiled in the Chicago vicinity as a direct result of the example set on the Elgin circuit. All of the small cities and many of the towns have oiled their through streets and many of the suburban streets from side to side; and not a few of the farmers have oiled the roads in front of their homes. There are many cases where several farmers have banded together and oiled long stretches. The next result is that the movement has been started. The people of Illinois actually have tasted of the fruits of killing dust and the movement is bound to spread over the entire state as well as over adjoining states. The direct results on the industry in the oiling of roads from the Elgin example cannot even be computed.

**W**HILE the oiling of roads is good from a motorist's point of view it is doubly good from a sanitary viewpoint. It is not healthy to live even in the open country and have a front yard clouded with dust the greater part of every afternoon and evening; and it is not healthy to have the rooms of a home, located close to the road, filled with road dust every time a car goes by. Oiling of roads is sanitary and it is economical. It is economical to the resident along the road, it also is economical to the party in the car, and, best of all, it is more healthy to both parties. It is not a wild plunge of the imagination to see the time when health officers will take the matter under investigation and make it imperative to oil roads in residential localities or else use other means of preventing dust, which means are equally, if not more, successful.

**I**N England tarring is used in preference to oiling. Each spring the road surfaces are thoroughly cleaned, all the loose dust is swept off, and if the road surface is in good condition an application of hot tar is used. This tar soaks into the road surface and forms a good binder. A road treated in this way in the spring is proof against dust for the rest of the summer, particularly in a country like England, where there is a short shower nearly every day. In America, where long periods of dry hot weather would prove a harder test, it might be necessary to use a heavier application. In applying the tar one-half of the road surface is coated at once and given time to dry before the other half is coated. In this way there is not any necessity for motorists getting their car bodies coated and ruined with the tar. Where road surfaces have to be improved, it is customary to apply a thin coating of crushed rock and to roll this into place with a heavy steam roller. The tar can be mixed with a finer coating of crushed stone, thus giving a good surface, capable of withstanding a season's wear. At the present the oiling, tarring, or building of special roads is looked upon as valuable because cleaner and more sanitary, but in addition it is more economical. In other words, if you have a good stone road surface it is cheaper to oil or tar that road and so save the surface than it is not to tar it.

## The Annual Model

**O**NE concern announces that it is not going to continue bringing out a new model or models each year; in another city a rival concern announces that it is going to continue bringing out a new model each season. In other cities the same story goes the round—one is and the other is not. The question arises, Which is right? It is a fact that in every developing industry the annual model is a wonderful incentive to buy. It is innate in the heart of man to be up to date if his pocketbook or bank account will stand it, and often he keeps there when the bank balance does not warrant it. Up to the present the annual model has proved a good seller, it has afforded a means of gauging the progress of the industry; it has worked hand in hand with the shows; and it has actually helped to sell cars. It has helped to sell cars because it has put a lot of good second-hand cars on the market, which would not have been on the market had there not been the annual model. Many people feel they cannot buy a new car and so look for a used one; and many owners have traded in their old cars in order to get new models. There is a strong possibility of selling cars by this interchange. It is true the second-hand business has brought not a few dealers to the verge of financial troubles, but it also is true that it has been the means of widening the buying field.

**A**N injury that the new model has worked in certain cities is that of breaking up what should be the end of the selling season. At present some makers announce their models early in May for the following year. May and June should be big selling periods and many makers look to these 2 months as the time to clean up the season's output. It is almost impossible to do this if some of the rival concerns announce the model for the following year at that time. Every maker should realize that May and June are months in which to sell cars for the present season, rather than months in which to take orders for the following year. It is a fact that not a few buyers who expected to get a car in May have not bought until July because they preferred to wait a month or so and get a new model. This disruption of the best spring selling season should be stopped. It would be better for the makers to agree among themselves not to announce new models before a certain date, which might be June 1. Frequently it happens that some concerns announcing new models early in May are not able to make deliveries until late in June. The result is equally damaging; it has thrust the new models on the mind of the buyer before the output of old models has been taken up.

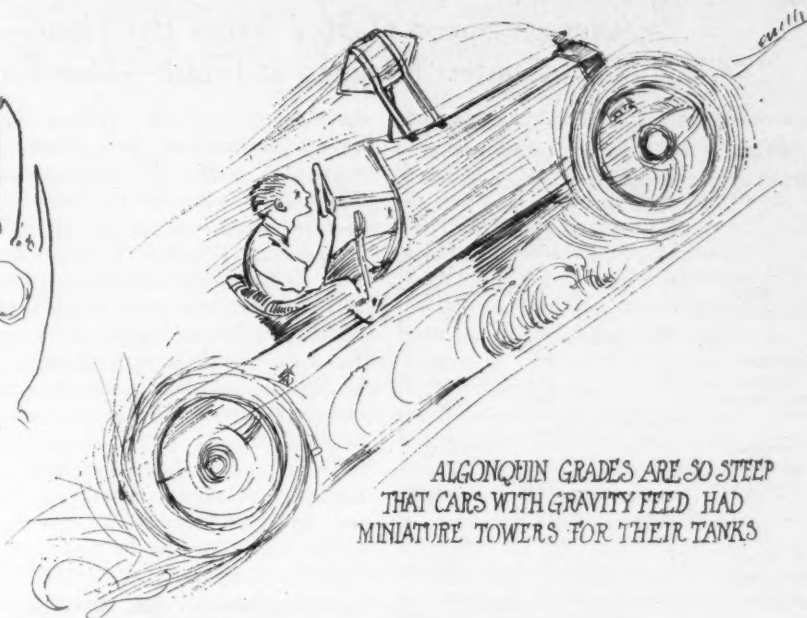
**T**HE taxicab drivers in London and Paris take off the front oil lamps and the tail lamps and carry them on the running board during the day time. By doing this the lamps are freed from a great deal of vibration and protected from any chance of injury by colliding with vehicles ahead or being run into by other vehicles from the rear. This is a commendable act in the matter of economy and could be practiced to advantage in many ways in America. For road touring heavy headlights should be removed during the day time because they are rarely used at night. On the right running board a small metal box can be used in which to carry them. The same applies to the rear lamp and the dash lamps. There is nothing much harder on headlights than rough country roads.



# National Climb As An Artist Viewed It



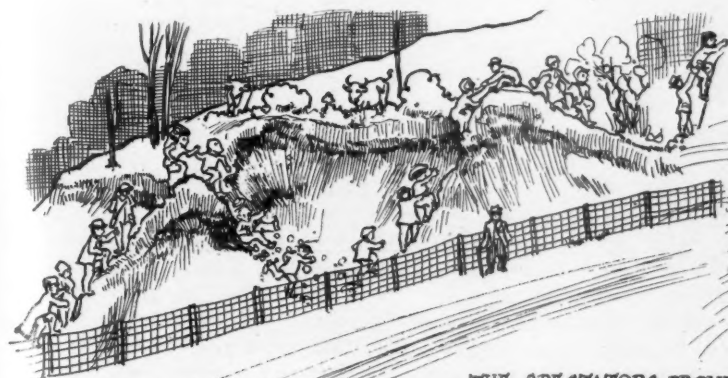
CARS WERE OBLIGED TO BE  
FAIR HILL CLIMBERS TO REACH THE  
CHOICE PARKING SPACES



ALGONQUIN GRADES ARE SO STEEP  
THAT CARS WITH GRAVITY FEED HAD  
MINIATURE TOWERS FOR THEIR TANKS



PHOTOGRAPHERS HAD GREAT SPORT  
ON THE TURN OF THE MORNING HILL



THE SPECTATORS PROVED  
GOOD CLIMBERS THOUGH NOT SPEEDY



THE FORD JUST "GOT UP ON HER"  
HIND LEGS AND CLUMB

# England Runs Its First Stock-Car Race

Royal Automobile Club Pulls Off 277-Mile Event at Brooklands Which is Won by Star at Average Speed of 56.7 Miles Per Hour—Sixteen of Twenty-One Starters Running at Finish—One Case of Tire Trouble

## RESULTS IN BROOKLANDS RACE

| One Hour          |           |        |  |
|-------------------|-----------|--------|--|
|                   | Distance, |        |  |
|                   | Miles     | Yards  |  |
| 3—Crossley        | 57        | 171    |  |
| 11—Star           | 56        | 1,421  |  |
| 21—Martini        | 45        | 321    |  |
| Two Hours         |           |        |  |
| 11—Star           | 113       | 65     |  |
| 9—Star            | 111       | 69     |  |
| 22—Singer         | 107       | 1,235  |  |
| Three Hours       |           |        |  |
| 11—Star           | 167       | 1,613  |  |
| 9—Star            | 163       | 1,265  |  |
| 22—Singer         | 158       | 143    |  |
| Finish, 277 Miles |           |        |  |
|                   | Time      | M.P.H. |  |
| 11—Star           | 4:53.09   | 56.7   |  |
| 22—Singer         | 4:57:25   | 55.9   |  |
| 9—Star            | 4:58.10   | 55.7   |  |

nose out No. 9 Star. Sixteen out of the twenty-one starters were running at the finish. It is the opinion that the Singer could have won the race had its driver sprinted earlier in the last few miles.

The Crossley, which was a factor in the first half-century, was forced out on the thirty-sixth lap when a magneto fastening broke. Before the finish No. 4 Schneider, No. 3 Crossley, No. 1 Arrol-Johnstone, No. 10 Thames and No. 21 Martini had withdrawn. There only was one car delayed by tire trouble.

The race was for four-cylinder cars, the R. A. C. rating of whose engines could not be more than 15.9. The maximum weight was 1,600 pounds, which was including driver and mechanic, fuel, tools and other appliances. The carrying of a mechanic was optional, but no other passenger was permitted.

The chassis, and particularly the engine, was of a design which is, or is intended to be made during 1911, a standard for touring cars by the manufacturers. Any car which is not considered to be a standard car by the judges was not permitted to start. The chassis could be fitted with any type of body, and the event was open for any competitors, that is, both owners and makers.

## SAVANNAH SETS DATES

Savannah, Ga., June 10—The Savannah Automobile Club has decided that it will run three races instead of two at its Thanksgiving road carnival. In addition to the grand prix and the Vanderbilt there will be run the Savannah challenge cup. The Vanderbilt and the challenge cup will be run on the same day; then there will be an intermission of a day and the grand prix will be run. This will bring the first day of racing on a Tuesday and the big event, the grand prix, on Thursday. This makes the dates of the racing November 27 and 29.

## WARNER EXPLAINS TIMING

Beloit, Wis., June 13—The Warner Instrument Co., whose electrical timer was used in the 500-mile race at Indianapolis, has today given out the reason for the delay in giving the official times at the race. It will be remembered that the race ended at 5 o'clock Tuesday evening, but the official reports were not given out until 7 o'clock the following Thursday morning. The delay was due to the seven methods of scoring which called for hours of checking.

There were seven different and distinct men scoring the race: First were four expert adding machine men with Burrough's

## STARTERS IN BROOKLANDS RACE

| No.                | Car   | Bore | Stroke |
|--------------------|-------|------|--------|
| 1—Arrol-Johnstone  | ....  | 3.14 | 4.72   |
| 2—Iris             | ..... | 3.14 | 4.49   |
| 3—Crossley         | ..... | 3.14 | 4.72   |
| 4—Schneider        | ..... | 3.14 | 4.72   |
| 5—Peugeot          | ..... | 3.14 | 5.12   |
| 6—Thames           | ..... | 3.14 | 4.72   |
| 7—Armstrong        | ..... | 3.14 | 4.72   |
| 8—Austrian Daimler | ....  | 3.14 | 4.33   |
| 9—Star             | ..... | 3.14 | 4.72   |
| 10—Thames          | ..... | 3.14 | 4.72   |
| 11—Star            | ..... | 3.14 | 4.72   |
| 12—Martini         | ..... | 3.14 | 4.72   |
| 13—S. C. A. R.     | ..... | 3.14 | 4.72   |
| 14—Argyll          | ..... | 3.14 | 4.72   |
| 15—Gladiator       | ..... | 3.14 | 4.33   |
| 17—S. C. A. R.     | ..... | 3.14 | 4.72   |
| 18—Vinot           | ..... | 3.14 | 4.33   |
| 19—Thames          | ..... | 3.14 | 4.72   |
| 20—Argyll          | ..... | 3.14 | 4.72   |
| 21—Martini         | ..... | 3.14 | 4.72   |
| 22—Singer          | ..... | 3.14 | 5.12   |

LONDON, June 13—Special cablegram—The first stock-car race ever run in Europe was decided today on the Brooklands track when the Royal Automobile Club conducted a 100-lap event in which it required that the contesting cars be up to catalog regulations. This race, it is believed, marks a new era in European competitions in that it introduces the stock car to the racing public. Foreign makers realize that building special cars is a costly experiment and does them little good in a business way.

The race today was at 277 miles or 100 laps of the big track. It attracted twenty-two entries and all but one, No. 16 Briton, started. The contest was won by No. 11 Star, entered by J. Lisle, which averaged 56.26 miles per hour for the distance. The second car was No. 22 Singer, entered by G. O. Herbert, while third was No. 9 Star, also entered by J. Lisle.

The winning Star is a 12-horsepower four-cylinder car with a bore of  $3\frac{1}{2}$  and a stroke of  $4\frac{2}{32}$  inches. Under the R. A. C. rating it shows 15.9 horsepower. The lubrication is by pump, the ignition a high-tension magneto; there is a pump water system, a leather cone clutch, a four-speed gearset, bevel drive, while the weight is 1,680 pounds.

The race proved an interesting contest. At one time the race seemed to be among the two Stars and the Crossley, the latter car being in second place at the end of 50 miles. At the end of the first hour the two Stars were leading, with the Martini third. The Singer worked to third at the end of the second hour, the two Stars being first and second. This order prevailed at the end of the third hour, but at the finish the Singer managed to

machines, one located in the timer's stand, one in the judges' stand, one in the press stand and one in the grandstand; second, were two dictaphones into which the men called the numbers of the cars as they passed, the same as they were called to the Burroughs machines; third, the Warner electric timer connected to a wire across the course. Three men operated the timer. One called the number of the approaching car, a second cut in the electric relay so that the time of passing was printed the instant the car touched the wire, and a third noted the number of the car on the printed paper ribbon of the timer, opposite the figures indicating the time at which the car crossed the wire.

The numbers printed by the four Burroughs adding machines were handed to sheet men who posted them on score sheets. These numbers came so rapidly that it was impossible for them to keep them checked up. As a result the scores on the different sheets varied at the end of the race, and called for a complete rechecking of results. The two score sheets were also made up from the dictaphone records, and one sheet from the electric timer. As there were more than 6,000 passages of the grand stand by competing cars in the race, the work of checking can be appreciated.

Only once during the race did the electric wire across the course for the Warner timer break. This put it out of commission for a short time. So great was the strain upon this wire that at the end of the race it had cut a groove nearly  $\frac{1}{2}$ -inch deep through the brick surface of the track. C. H. Warner has estimated that with the forty cars on the  $2\frac{1}{2}$ -mile course there was an average of a car passing the grand stand every 3 seconds.



# Cars of All Nations in French Race

Ford Will Be One of Contestants in Event at Boulogne on June 25—England, Belgium, Germany and Italy Also Represented in Road Event—Gregoire Springs Something New in Body Styles for the Contest

PARIS, June 1—Forty-four cars, representing seventeen manufacturers and six nations, have been entered for the light-car race to be run at Boulogne on Sunday, June 25. France has twenty-two cars from the following factories: Lion-Peugeot, Gregoire, Alcyon, Cote, Delage, Sizaire-Naudin and Koecklin; England has eight cars supplied by Arrol-Johnston, Calthorpe, Sunbeam and Vauxhall; Belgium also has eight, built in the Excelsior and Fif factories; Germany has four cars from N. S. U. and Mathis factories; Italy supplies an S. P. A. car and Henry Depasse will represent America with a standard Ford. The number of entries is higher than that obtained for the grand prix races of a few years ago, and although the cylinder area is only 3 litres compared with 12 to 15 for the old type of racing car, it is confidently expected that the little racers will be as fast as the big ones of three years ago.

The Ford car entered at the last moment by Henry Depasse, general agent for France, will be an absolutely standard chassis fitted with a racing body. The Fords were kept out owing to the regulation fixing the minimum weight at 1,763 pounds. At the last moment, however, permission was given to enter the Ford without the 400 odd pounds of ballast which it ought to carry, on condition that an absolutely stock car was used. Henry Depasse accepted the condition, and although he has no hope of winning the race, he is confident that he will not be last home, and that the average speed of the little American car will surprise some of the spectators.

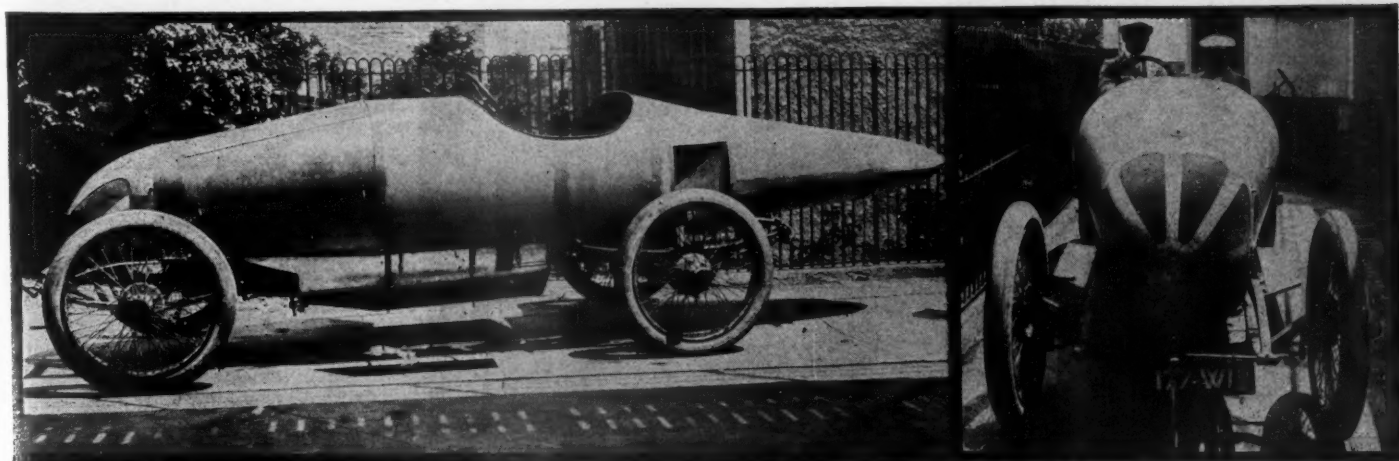
As an example of European tendencies in car design, the four racers produced by the Gregoire Co. for the light car race at Boulogne-sur-Mer, on Sunday,

June 25, are endowed with more than ordinary interest. The firm is of the opinion that the ordinary type of body is unsuitable for high speed, and after numerous experiments on the road and in the laboratory, has produced an interesting series of stream-line touring and inside steering bodies. It was thus to be expected that in the cars built for one of the most important races ever held in France—for the result of this race will influence sales more than any of the old grand prix or Gordon Bennetts—very close attention should be paid to body design.

The designer has not had a free hand, for the regulations stipulated a certain width of seat, a certain height of seat, mudguards of a given width, and a running board. But while working within these regulations the company has produced what it considers to be the most efficient type of body yet designed. It is roughly cigar-shaped with the blunt end forward. The bonnet is extended ahead of the radiator and is bullet-shaped with panels of wire gauze for the passage of the air. As it passes towards the center the body widens until the greatest width is obtained just ahead of the driver's seat, and from this point it narrows until it forms a fine point astern, the body extension rear of the frame being nearly 5 feet. The portion of the body above the frame members and the mud pan below form an unbroken line, so that if a vertical section were taken through the center of the car it would be found to be roughly heart-shaped, with the point downwards. This has been adopted in order to reduce the amount of pressure between the pan and the road, experiments having shown that the pressure at this point when the ordinary type of flat pan is used is really considerable.

The body is made as light as possible, being built of sheet steel and aluminum. There are no external projections to give a hold to the air. Even the under shield is extended upwards and rearwards until it joins the tail, and all hooks and catches have been eliminated. There are no openings in the bonnet for the exhaust pipe, this being carried rearwards within the pan and discharging horizontally near the rear axle. The surface of the car is practically as smooth and as free from projections as that of a racing boat. There is only one outside fixture, this being the spare wire wheel, which is carried on the left-hand side between the two mudguards.

Although the motor generally follows standard design, it has been specially prepared for the race. The cylinders, having a bore and stroke of 3.14 by 5.86, are cast in pairs with valves on opposite sides and consequently two camshafts. It develops 65 horsepower at 2,500 revolutions. The valve diameter is enormous, being no less than 2.9 inches, or only .2 inches less than the cylinder diameter. The high-tension Bosch magneto is one of the new type firing two plugs per cylinder, both plugs being mounted in the cylinder head and of course firing simultaneously. Reciprocating parts are made as light as possible, the pistons being machined out of nickel steel bars, with their walls as thin as is consistent with safety, and the connecting rods being tubular, with anti-friction metal for the bearings. The crankshaft is carried on ball bearings at each end and a large plain bearing in the center lined with anti-friction. Lubrication follows the standard practice of oil supply by pump off one of the camshafts to a dashboard tank and sight feeds, and gravity flow from this point to the main bearings and the crankcase, the rest being by splash.

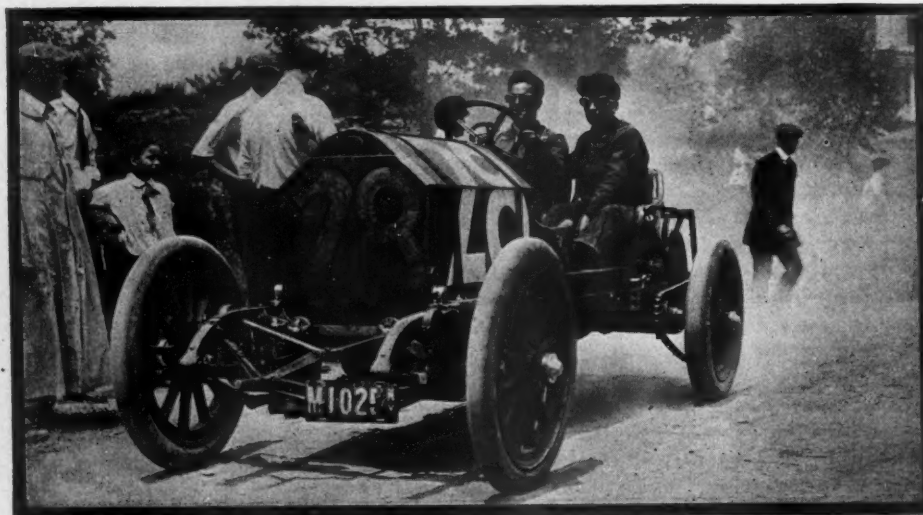


TWO VIEWS OF THE GREGOIRE WHICH IS IN FRENCH ROAD RACE

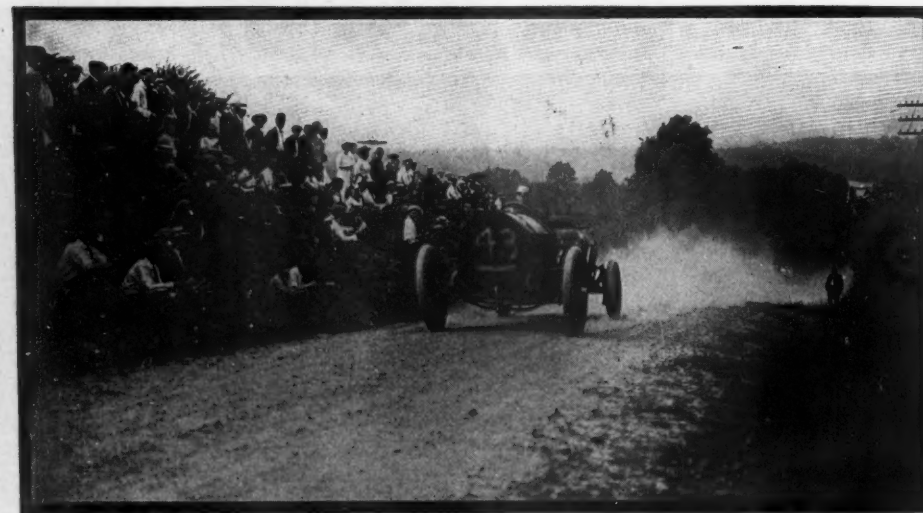
# Record Crowd Watches Yale Climb



CARS LINED UP FOR START OF YALE HILL-CLIMB



JOE MATSON IN FIAT IN YALE CLIMB



BELCHER IN KNOX COMING UP SHINGLE HILL

NEW HAVEN, CONN., June 10—Before the greatest crowd that ever gathered to witness a hill-climbing contest in New England, the annual climb of the Yale and New Haven Automobile Clubs was held today on Shingle hill at West Haven. It was a thoroughly satisfactory event in which each class attracted a good field and developed a sharp contest. The stock-car program which had been advertised was abandoned because of the small number of cars that would have been eligible to go and the consequent reduction of the fields in these events, but two of the climbs were actually fought for by simon-pure stock cars, all of which will be eligible within a few weeks for such classification. In the other events there were some real stock cars which showed dazzling speed and hill-climbing ability.

The honors of the day went to a six-cylinder Knox of 60 horsepower which won its class event in :52.75, defeating the Fiat which was driven by Bruce-Brown in the recent Indianapolis 500-mile race. In the field also were a Palmer-Singer and a Houpt-Rockwell. The Knox made the climb with a margin of over 3 seconds to spare.

In the class events, the Empire 17 won the race for little cars, closely pressed by another Empire. The Hupmobile was a rather distant third. The next higher class went to the Ford 25, in a tight fit. The Paige-Detroit was second, a little over a second behind, and Buick 23 was a close third. S. P. O. 31, Correja 68 and Metalurgique 30 were the placed cars in the 231-300 cubic inch piston displacement class, while Marion 35, contesting with an amateur driver, would have taken second place had the car been eligible to compete with the professionals.

In the 301-450 class, National 38, driven by Caleb Bragg, won handily from a four-cylinder Knox and an Amplex. The 600-cubic inch class went to the big Knox, as has been told, and in the amateur section of this event Fiat 49 took the cup in 1:00.15 from a Simplex and two Stearns cars.

The free-for-all developed some of the most spectacular driving ever seen on a hill. The winner, a 200-horsepower Fiat, driven by Bruce-Brown, broke the record of the hill by 6 seconds, taking more chances than were comfortable but meeting with no mishaps. The big Knox was second, making about the former record, and the Indianapolis Fiat was third under Matson's handling. In the amateur section Simplex 70, driven by Heitmeyer, was a handy first with Rutherford's National second and Simplex 50 third.

Shingle hill measures 40 feet more than 9-10 mile and has two stiff grades and an S turn in between. The starting line is on a slight grade, which rapidly increases into



# Fiat and Knox Stars on Shingle Hill

a hill with a maximum of 14 per cent and an average of 12 per cent for a little more than 300 feet. At the top of this hill there is a curve to the left and a gentle down grade to the S turn. This part of the climb was taken wide-open by all the contestants in order to get up sufficient velocity to carry them to the top of the final rise. This hill commenced directly after emerging from the S curve and had a maximum grade of 18 per cent with an average of slightly less than 15 per cent. The finishing line was about 100 yards from the brow of the hill.

After the finish the road was pretty straight for 200 feet and then curved rather sharply. This resulted in some spectacular skidding after several of the big cars finished, but fortunately no one over-set.

The small cars labored severely in making the ascent, but the grade had little appreciable effect on the most powerful of the road locomotives entered in the contest. The hill does not compare in severity with Port Jefferson, Giant's Despair, Jacob's Ladder, Johnson's drive or the Dead Horse. Summary:

## EVENT 4—160 INCHES AND LESS, CLASS C

| No. | Car       | Driver    | Time    |
|-----|-----------|-----------|---------|
| 17  | Empire    | Hotchkiss | 1:21.52 |
| 14  | Empire    | Kaesar    | 1:22.22 |
| 16  | Hupmobile | Bishop    | 1:46.62 |

## EVENT 5—161-230 INCHES, CLASS C

|    |               |         |         |
|----|---------------|---------|---------|
| 25 | Ford          | Smith   | 1:13.25 |
| 21 | Paige-Detroit | Craig   | 1:14.55 |
| 23 | Buick         | Bull    | 1:14.82 |
| 20 | Oakland       | Bauer   | 1:18.36 |
| 24 | Cutting       | Lee     | 1:27.35 |
| 22 | Regal         | Stevens | 1:29.58 |

## EVENT 5X—FOR AMATEUR DRIVERS

|    |       |        |         |
|----|-------|--------|---------|
| 47 | Buick | Hooker | 1:24.05 |
|----|-------|--------|---------|

## EVENT 6—231-300 INCHES, CLASS C

|    |              |          |         |
|----|--------------|----------|---------|
| 31 | S. P. O.     | Robinson | 1:08.09 |
| 68 | Correja      | Brainerd | 1:13.17 |
| 30 | Metalurgique | Bragg    | 1:14.35 |
| 33 | Marion       | Strauss  | 1:16.55 |
| 29 | Correja      | Gillam   | 1:18.82 |
| 32 | Cutting      | Lee      | 1:21.97 |

## EVENT 6X—AMATEUR DRIVERS

|    |        |              |         |
|----|--------|--------------|---------|
| 35 | Marion | Thebaud, Jr. | 1:12.57 |
|----|--------|--------------|---------|

## EVENT 7—301-450 INCHES, CLASS C

|    |          |        |         |
|----|----------|--------|---------|
| 38 | National | Bragg  | :54.27  |
| 36 | Knox     | Coffey | :56.50  |
| 39 | Amplex   | Jones  | :58.85  |
| 37 | Oakland  | Bauer  | 1:20.05 |
| 41 | Buick    | Bull   | 1:20.82 |

## EVENT 8—451-600 INCHES, CLASS C

|    |                |           |         |
|----|----------------|-----------|---------|
| 43 | Knox six       | Belcher   | :52.75  |
| 28 | Flat           | Matson    | :55.98  |
| 64 | Palmer-Singer  | Schoeneck | :59.70  |
| 44 | Haupt-Rockwell | Cotteral  | 1:03.35 |

## EVENT 8X—AMATEUR DRIVERS

|    |         |             |         |
|----|---------|-------------|---------|
| 49 | Fiat    | Steinbrugge | 1:00.15 |
| 50 | Simplex | Haas        | 1:03.77 |
| 67 | Stearns | Tours       | 1:08.11 |
| 51 | Stearns | Iselin      | 1:14.04 |

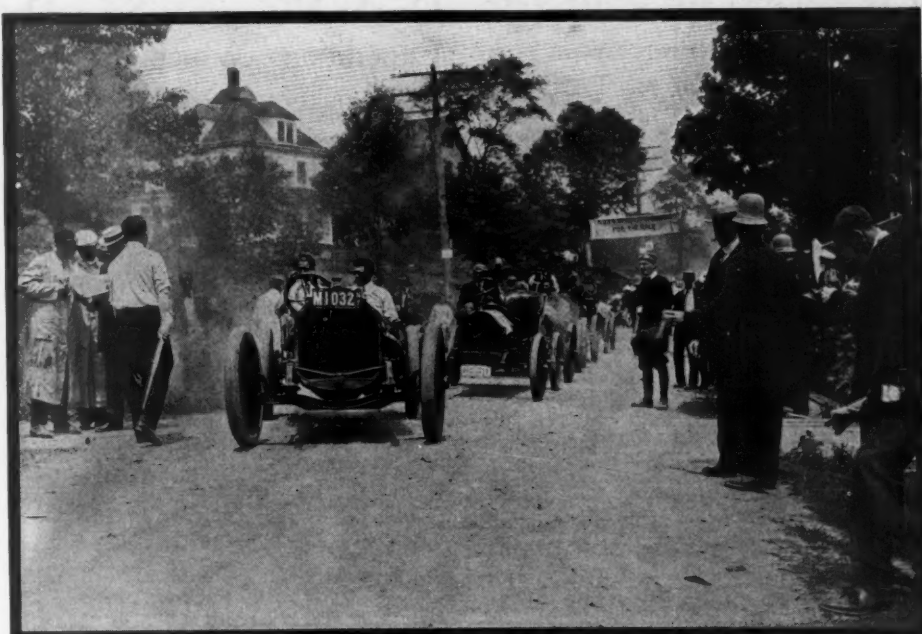
## EVENT 10—FREE-FOR-ALL, CLASS D

|    |             |             |        |
|----|-------------|-------------|--------|
| 53 | Fiat        | Bruce-Brown | :45.29 |
| 48 | Knox 6-cyl. | Belcher     | :51.74 |
| 52 | Fiat        | Matson      | :53.85 |
| 65 | Simplex     | Coote       | :54.37 |
| 38 | National    | Bragg       | :55.48 |
| 36 | Knox        | Coffey      | :56.16 |

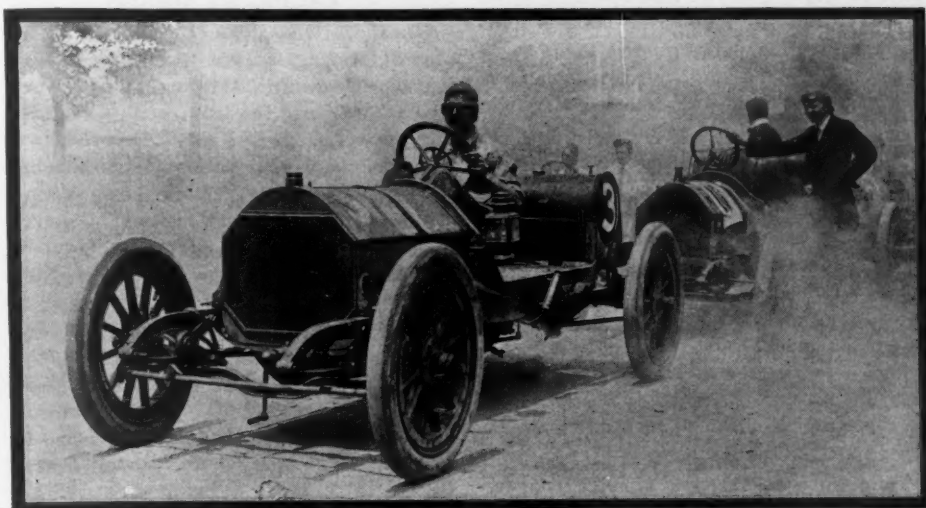
## EVENT 10X—AMATEUR DRIVERS

|    |          |            |         |
|----|----------|------------|---------|
| 70 | Simplex  | Heltmeyer  | :55.34  |
| 42 | National | Rutherford | :57.71  |
| 50 | Simplex  | Haas       | 1:02.20 |
| 51 | Stearns  | Iselin     | 1:12.50 |

A 10-horsepower Stanley steamer made the climb in exhibition in 1:18.45 and three White trucks negotiated the grade in good order. The 1,500-pound wagon made it in 2 minutes; the 1½-ton truck in 2:08.22. The 3-ton wagon with a big load just made the hilltop. A Kelly 3-ton truck also made the climb and finished, but was not timed.



WAITING FOR THE CLIMB TO START



S. P. O., A CLASS WINNER AT NEW HAVEN



BRAGG IN NATIONAL WINNING 301-450 CLASS

# Nebraska Starts Good Roads Snowball

OMAHA, Neb., June 12—The interest which the people of Nebraska feel in the subject of good roads in general, and in a North Platte highway in particular, was clearly demonstrated last week when the Omaha World-Herald's good roads special car went over that highway, starting from Omaha, and going to North Platte.

At every town along the way committees and lines of motor cars were on hand to greet the tourists, and wherever possible, short good roads meetings were held. In most cases cars were waiting at the county line to escort the visitors across the county, some of them traveling a total of 100 miles while escorting them.

The special started out Monday morning, June 5. While the car ran from Omaha, Mr. Stephens joined it at Fremont, when the real work of the trip began. An Inter-State 50 was provided by the Omaha Inter-State Co. Mayor F. Wolz of Fremont also accompanied the party. The visitors were given a big send-off at Fremont. At Ames, 7 miles away, a party from North Bend met them to escort them to that city. A crowd assembled on arriving there and Mr. Stephens made a good road talk. The party piloted them on to Rogers, and here another delegation from Schuyler met them and escorted them on. Colfax county had not gotten quite as good a start on the road movement as Dodge county, in which Fremont is located, but the interest displayed showed that the movement will now be taken up with a will. The car went on to Richland, and then to Columbus, where there was a big delegation, and the tourists were entertained at lunch. One of the interesting things here was the arrival of twelve men from Lindsay, in the midst of a good roads country, who had driven 37 miles to learn more about road-building.

They went on through Merrick county, where there has been the keenest kind of interest in good roads, resulting in great improvement of the highway. Nearly every farmer in this county recently donated 2 days' work to improve the roads, which are quite sandy. Soil was hauled onto the roads by these farmers to mix with the sand. A big parade from Central City met them and escorted them to the city, paraded in the evening, and a rousing meeting was held.

The second day the special received just as enthusiastic a welcome all along the way. Early a delegation from Grand Island met the tourists and accompanied them. At Grand Island at noon a largely attended meeting showed the interest there. From Grand Island west some of the best roads on the highway were encountered. Wood River was especially interested. At Shelton a party from Kearney took the special under its care. A night meeting was held at Kearney, and

## Omaha Newspaper Sends Out Expedition Which Arouses Cornhuskers to Need of Highway Improvement in the State

here, in accordance with the ideas of Mr. Stephens, a resolution was adopted calling for the taking of steps to form a Platte Valley Good Roads Association, which would further boost the work.

The third day proved just as good a one. Meetings were held at Elm Creek, Gothenburg and Overton, among other towns, all of these towns having out delegations. Lexington motorists, in the uniforms of their club, traveled 100 miles to escort them. The night meeting was at North Platte, a general discussion being held at the Elks' club. Some of the least developed of the roads were encountered the third day. The return trip was made in 2 days, without stops.

### RACING AT OMAHA

Omaha, Neb., June 12—A series of 3 days of racing marked the opening of the Omaha speedway last week. This is only the second year for this 1-mile dirt track, but it was in better shape than last season, and there were better accommodations for the spectators. While several accidents marred the races somewhat, nevertheless there was a better list of entries and better races than at any of the three meets last year.

There were five entries in the first event, a 10-mile race, on Friday, June 9. In this it looked as if Billy Pearce in his Falcar would carry off the honors, as he was leading, but he had tire trouble, and so only landed in second. The result was: Cadillac, Larry Nygard, won, time, 11:05½; second, Falcar, and the Badger, Jim Ralston driving, third.

F. E. Doherty was driving a Maytag-Mason in this race. In the middle of the event two men, Joseph G. Zimmer and H. H. Marquart, of Avoca, Neb., attempted to cross the track in a car, to get within the field, slipping by the officials. The Maytag-Mason racer struck it squarely. Doherty suffered a broken ankle, a broken rib and wrist. Marquart was thrown to one side of the track with a broken hip, while Zimmer was only slightly bruised. Both machines were completely wrecked.

In another race the Cutting, driven by J. D. McNay, of Chicago, was running close with the Buick for first place. On one turn the Buick, driven by A. L. Frahley, slowed up. McNay was compelled to turn into the bank, his front wheels banging into the rear of the Buick. Both machines were injured, but the drivers escaped unharmed. In the 50-mile free for all, the

Mercer, driven by Bob Kragel, threw a tire and ran into a post, but Kragel was not injured.

The big event of the day was the 50-mile free for all. Nine cars were entered in this. The Firestone-Columbus took the lead and held it for several miles, but the Falcar, which had been running fifth, took the lead on the sixteenth mile, holding it then to the end. The Franklin went into second place on the forty-fourth mile, the Buick and Cutting having been put out by the collision. The race was won by Pearce in a Falcar in 56:43½ with Russell in the Franklin second.

The second event, 10 miles, with four starters, was won by Pearce, Falcar, in 10:26; Merrill in a National was second and Frahley in a Buick third.

The second day's racing went off without a hitch or accident, the attendance being very much heavier than on the previous day. A 10-mile obstacle race had four starters, who were the contestants to kill their engines at the end of each mile, jump out, crank up and start. Bruner in a Hudson won in 16:49 4-5.

Event 4 for cars under 451 cubic inches, brought out seven starters. McNay in a Cutting won in 10:13. Pearce in a Falcar was second and Strakle, in a Buick, third.

The final event of the day was a 25-mile free-for-all with five starters. McNay in a Cutting won in 25:52½, with Pearce in a Falcar second in 28:04 4-5, and Frahley in a Buick third in 29:27.

The third and last day's racing brought out the most serious accident of the meet when Fred Nygard, driving a Cadillac, was fatally injured and his brother, Larry Nygard, was badly injured in a mixup. The only race of the day was a 5-hour endurance. At the time the Cadillac, driven by the Nygard brothers, was running wheel and wheel with the Franklin, when the former flung a tire. Instantly the big car went up in the air, turned over twice, and struck the ground with terrific force. The Nygards were thrown 50 feet and when picked up were unconscious. Fred Nygard's skull was badly crushed. Larry had a rib, an arm and a leg broken. He probably will recover. Surgeons hold out no hope for the recovery of Fred Nygard.

The starters were the Badger, Ralston driver; Hudson, Bruner; Hupmobile, Smith; Mitchell, Haworth; Cadillac, Nygard; Mercer, Stegger; Franklin, Russell; Cutting, McNay. The Franklin won with 236 miles; the Hupmobile was second with 202 miles, and the Badger third with 170.

### OKLAHOMA'S ROAD PLANS

Oklahoma City, Okla., June 10—Local motorists are gleeful at the outlook for improved roads through this county, the first petition to start the movement having



# N. A. A. M. to Have New York Show

been filed with the county commissioners. The petition contains 3,600 signatures, which makes it imperative for the county commissioners to call an election to vote the bonds. The large number of signatures indicates that the bonds will carry, for all who signed the petition will vote and work for the passage of the bond issue.

The plan outlined, and which seems a certainty of execution, provides for a road through the county from north to south and one across the county from east to west. Both will cross at Oklahoma City, the county seat. The material used will be asphalt and macadam, the extension of the streets from this city to be of asphalt and to extend some distance into the country to points where the roads will be continued with macadam. The estimated cost of the two intersecting roads will be \$500,000, and the movement will not cease until a great hard highway has been built across the state from Texas to Kansas, and another from Arkansas to the western part of Oklahoma. In addition to the two main roads which will be built, laterals will also be constructed, and it is safe to assume that in 12 months from this time motor cars can traverse Oklahoma county in two directions over the finest suburban roads in the state.

## MISSOURI TALKING ROADS

St. Louis, Mo., June 10—A movement for the construction of a 300-mile state highway from St. Louis to Kansas City is being pushed by Governor Hadley, who announces that the route will be selected by the early part of August and the grading completed by the latter part of September. Recently the governor has been in conference with State Highway Engineer Curtis W. Hill, and with other persons interested in the good roads movement, including the Automobile Club of St. Louis. At his suggestion, the state highway engineer mapped out three tentative routes, two of which are north of the Missouri river and one south of it. These were designated as the northern, southern and central routes, and have been laid out in blue prints for the governor's inspection. The executive has appointed a committee to select one of the proposed routes. The governor plans that the state and the counties affected shall both contribute money for the building of the highway. Under the law, a county may obtain from the state one-half the amount it expends in permanent road improvements. The central and southern routes are of historical interest, the first following an old military road, and the second being along the line of the old Santa Fe trail. Each of the routes suggested has long strips of permanent road which may be utilized and thus save expense to those back of this movement.

## Garden Not Deemed Large Enough to Accommodate All, so Plans Are Made for a Second Exhibition in Gotham

NEW YORK, June 12—The National Association of Automobile Manufacturers, Inc., has practically decided to conduct a show in New York during the coming winter. The matter was fully discussed at a meeting of the executive committee held on Thursday last, at which there were present: William E. Metzger, S. D. Waldon, Thomas Henderson, Charles Clifton, Alfred Reeves, R. D. Chapin, L. H. Kittredge, W. T. White, A. L. Pope, J. W. Gilson, S. A. Miles, general manager.

The membership of the National association, which has been growing rapidly of late, embraces a number of concerns for whom it is impossible to provide space at the Madison Square garden show, under the Automobile Board of Trade. The association feels that provision should be made, not only for such members, but for all other manufacturers so that all may have an equal opportunity to place their new models before the eastern public. It is probable, and indeed practically certain, that the dates will be identical with those of the garden show. Officials of the association are now examining available buildings, of which there are at least three in New York. Definite action may be expected at a meeting to be held on Friday, July 7.

At the April meeting the association adopted a resolution relative to those manufacturers who took part in an unsanctioned show last winter. It had been reported by many of these manufacturers that they participated through misunderstanding of the association's rules and other circumstances. The executive committee felt that the object of the sanction rule had been sufficiently explicit by the disbarment of these manufacturers from sanctioned shows last winter, and decided to reinstate those makers who filed formal application. Since that time the Columbus Buggy Co., Geneva Wagon Co., Seitz Auto and Transmission Co., Maytag-Mason Motor Co., Lion Motor Car Co. and Alpena Motor Car Co. have been reinstated.

An arrangement has been entered into between the National association and the Motor and Accessory Manufacturers, under which the traffic interests of members of the latter will be taken care of by the traffic department of the former. The accessory manufacturers will be extended exactly the same privileges as are now enjoyed by members of the National association, which means that such matters as freight rates, classification, the check-

ing of freight bills, the preparation and prosecution of claims, etc., will be taken care of without cost to any member of the Motor and Accessory Manufacturers.

Eleven members have recently been added to the membership list of the National Association of Automobile Manufacturers, Inc.

## DETROIT TRADE GOSSIP

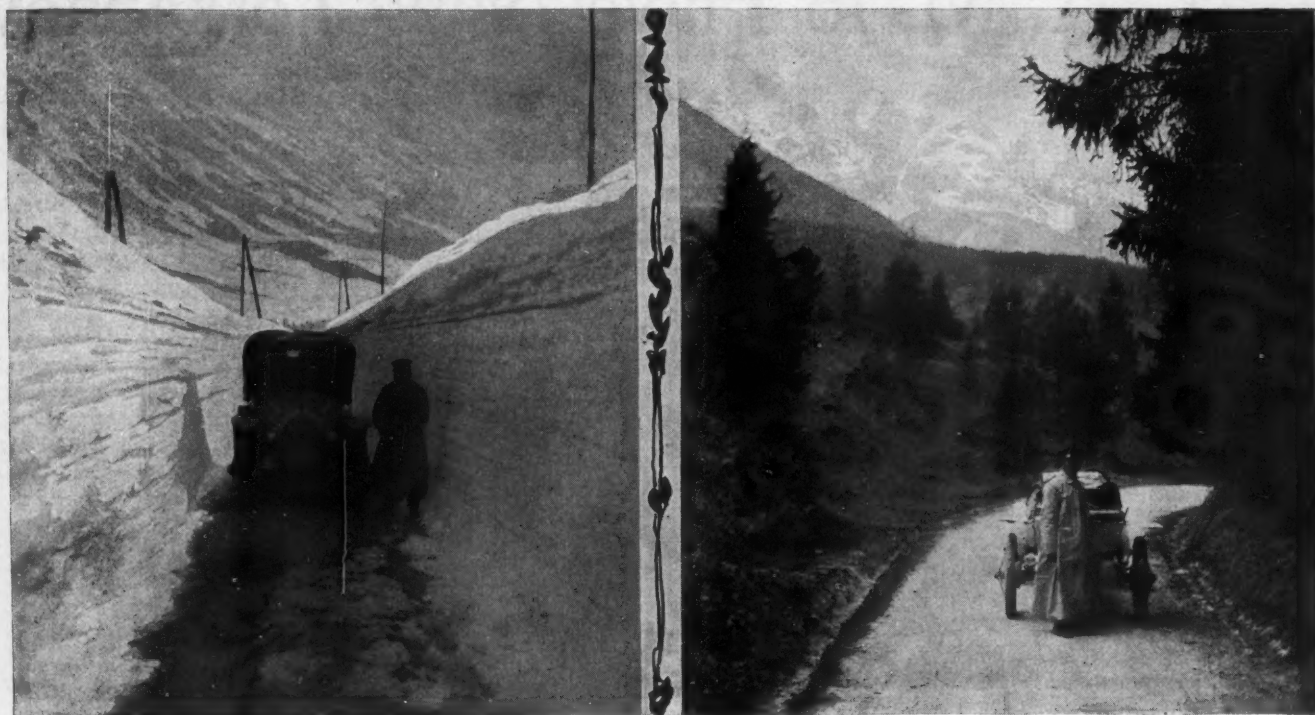
Detroit, Mich., June 12—The arrival in Detroit of Walter Wilmot, manager of Detroit's summer and winter motor car exhibitions, calls attention to the fact that in all probability the first building in which will be gathered a really representative array of the 1912 models will be the one devoted to the purpose at the Michigan state fair in September.

The motor building was opened last year with a very fine array of representation. Not nearly all the space was taken, however, and some of the vistas of empty floor were rather discouraging. This season Mr. Wilmot has started work early on the project and reports already that car and accessory manufacturers to a number more than sufficient to fill the big building have applied for space.

To the local industry the state fair affords an interesting opportunity. To the retail dealers and state agents it is one of the busiest weeks of the year. At present every dealer in the state is being instructed to bring his prospects at that time not closed to the state fair, where he will be given the help of the city salesmen in closing his deal. Many of the state agents place subdealers and renew contracts at the state fair. In addition, many buyers from the country plan to make their purchase of a car in the big building where they have an opportunity of looking over such a complete line of cars.

An important announcement has been made by the General Motors Co.—that of the payment of \$500,000 of its large loan, negotiated late last fall. The showing which the General Motors factories have made this spring leads to the confident prediction that the entire loan will be repaid as rapidly as it becomes due, with a strong probability that the debts may all be discharged before the date originally set for complete liquidation. On October 1 \$1,000,000 more will be due. This is already practically provided for out of the profits of the Cadillac, Oldsmobile, Buick and other properties.

In general it is noticeable that the tone of business is much stronger than was the case a year ago. While some of the Detroit factories have not produced as many cars as they did last year, none is confronted with the conditions which prevailed in the face of the tremendous outputs of 1910.



THROUGH THE SNOW WALLS IN THE TAUERN

IN THE TAUERN MOUNTAINS

## Cars Climb the Alps In Reliability Run

VIENNA, May 27—The 4-day, non-stop tour through the Alps promoted by the Automobile Club of Austria ended in twelve of the fifty-seven cars coming through with perfect scores. These twelve were: five Austrian Diamlers, a British Diamler-Knight, a Laurin-Klement, a Puch, an N. A. G., an Audi and two N. W. or Nesselsdorfer Waggonfabrik.

No motor car touring event held in old Europe in recent years can be compared in point of severity with this Austrian contest. The severe Scottish trials and the Swedish reliability trials held in mid-winter when the temperature often is near zero were just ordinary hard contests. It remained, however, for the Austrians to present to the motorists looking for real hard tests a genuine severe road trial.

The route of 887.4 miles selected by the Austrian club included on its course the highest mountains having roads which could be safely traveled over by motor car or, in other words, roads sufficiently wide and sufficiently fair in condition. Some of the roads never had been traveled before by motor cars, as it was deemed folly to try it, yet after the pathfinders had gone over them, although they met with much hardship, it was decided to take a chance.

### Troubles on the Road

On the first day the fifty-one contestants went from Vienna to Aussee by way of Melk, Enns, Wels, Lambach, Gmunden, Ischl and the Potschen heights, 196 miles all told. This was comparatively easy to

### Twelve of Fifty-seven Contestants Make Strenuous Trip With Perfect Scores—Trip Test of Motor Stamina

travel, as the hills were not very steep and the roads in general quite good, but nevertheless quite a number of cars met with mishaps. One car was laid up on account of a broken connecting rod, another had a broken steering gear, a third one's motor gave trouble. Tire troubles were many and in one case the contestant lost his clean score not on account of the tire troubles but because while the latter were being repaired the motor suddenly stopped.

The second day the real test began when the contestants drove from Aussee to Trieste, a distance of 251 miles, including on its course four mountain passes—the Tauern, about 5,580 feet high, the Katschberg, about 5,400 feet high, the Dohratsch, approximately 7,100 feet high, and the Predilpass, some 3,800 feet high.

Gradients of 12, 15 and 20 per cent were so frequently met that after awhile it seemed only natural that such steep going would be found all day. Not very long after the start from Aussee at the beginning of the Tauern, the first steep going was found, when for a distance of about  $\frac{1}{2}$  mile the gradient was 22 per cent. The roads were most all snow-covered and at times the contestants traveled between

what looked like snow walls. The scenery was at all times as beautiful as one could dream of and the cold weather, the hardships of having to drive on without stopping, except when through absolute necessity, were almost forgotten at the wonderful sight of nature in this section of the country.

### Climbing the Mountains

On the third day of the tour the course was from Triest to Klagenfurt, and included on the route was the Maggiore mountain and the Loibl pass. The gradient varied from a minimum of 12 to a maximum of 22 per cent. Some parts of the mountains were covered with snow and others were snowless, but the road itself often was abominable and caused tire trouble. Several clean-score cars came to grief, some for minor reasons. On the last day, Klagenfurt to Vienna, 252 miles, the route was not so hilly, but instead cobble stones were encountered.

The organization of the tour was perfect in every respect. The accommodations for the contestants in the hotels and garages could not have been improved. An illustration of the good management was afforded in Aussee and Triest, where there were no garages large enough to hold all the cars.

As the motor hoods were sealed and had to remain as such all during the tour, all the contestants provided little novelties in order to be able to reach certain parts under the bonnet. For instance, the openings through which gasoline and lubricant



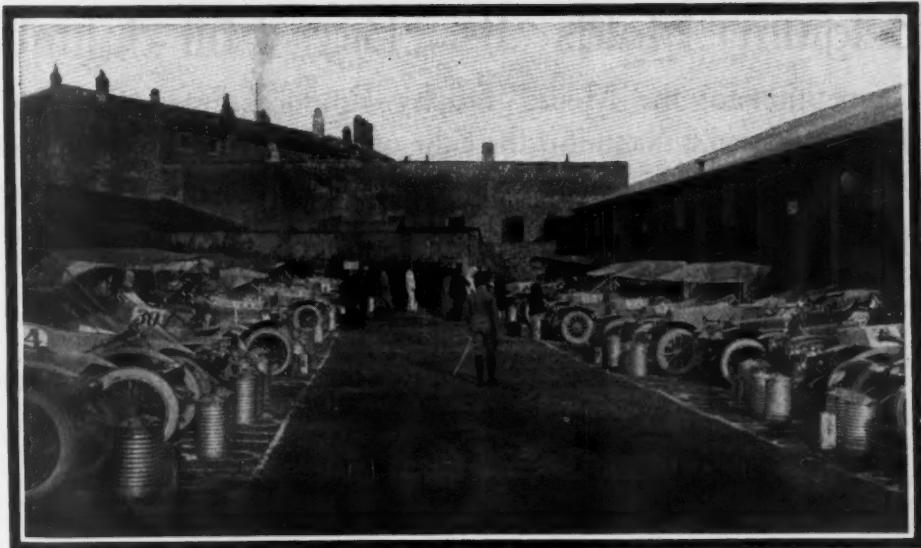
could be poured were arranged so that the hood had not to be removed. Some cars were provided with a second fuel tank, which was attached against the dashboard. In some cases the two fuel tanks were connected so that it was possible during the tour to pump the fuel from one tank into the other. On the Austrian Daimler of Count Schoenfeld a wire netting was attached at a few inches in front of the ventilator for the purpose of preventing dust and dirt from getting into the honeycomb radiator. On two cars an addition had been made upon the regular radiator in order to permit a larger quantity of water to be carried.

Seventeen different makes of cars were represented in the trials, namely, the Austrian-Daimler, Laurin-Klement, Puch, Audi, Apollo, N. A. G., Fiat, N. W., Graft-Stiff, Oryx, Fidi, de Dion-Bouton, Daimler-Knight, Erhardt, Mathis, Nacke and Opel. All of the ten Austrian Daimlers finished and five came through with perfect scores. This also was the case of the British Daimler-Knight which started.

Three cars, a Fiat driven by Prince A. de Croy, another Fiat driven by Chevalier von Guttmannsthal, and a Puch driven by A. von Palugyay, were disqualified because they drove ahead of other contestants while going through a village, which was forbidden according to the rules.

#### FIGHT IN FRENCH CLUB

Paris, June 1—Car manufacturers and social clubmen, all members of the Automobile Club of France, are waging a fierce fight. The French national club comprises two distinct bodies—an association for the encouragement of motoring, and a purely social club. Since the incorporation of the Yacht Club with the Automobile Club of France, the social element has assumed considerable importance and the gaming tables have been more patronized. The clubmen, having no business connection with the motor industry, and frequently not even owning a car, have objected to all expenditure for the en-



THE OPEN AIR GARAGE IN AUSSEE

couragement of motoring. A few months ago the club committee voted the sum of \$40,000 for the encouragement of flying, and although this left \$100,000 in reserve, the club members set up a howl of rage at this squandering of good money. Of late personalities have worked their way into the quarrel, and an attempt has been made to oust the president, Baron de Zuylen, although he has occupied his post since the club was created, on the ground that he was not of French nationality.

A conciliatory committee proposed that the general committee of the club should be reduced to sixty members, half of them representing the motor industry and half the social side of the club; it was also suggested that Baron de Zuylen should remain as president. But when the committee's proposal came before the general meeting of the club a storm broke out, Marquis de Dion, one of the vice-presidents of the club, putting himself forward as the trade candidate to the presidency in opposition to Baron de Zuylen, the foreign president. Marquis de Dion was defeated, the joint committee of thirty trade and

thirty club members was elected, and confidence was voted in Baron de Zuylen. Thereupon Marquis de Dion sent in his resignation both as vice-president and as an ordinary member of the club, stating in his letter that he objected to a foreign president, that he would not sit by the side of certain members of the new committee, and that he hoped the club which he had helped to create would not become a common gambling house.

#### BERLIN PREPARES FOR SHOW

Berlin, May 27—The American idea of uniform show decoration and "everything included in the space rates" will prevail for the first time in the history of Germany at the international motor car show which the Kaiserliche Automobile Club is promoting and which will be held October 12-22 of this year in the exhibition halls of the Berlin zoological garden.

Although it is supposed to be a show open for all kinds of "motor cars having three or four wheels," no commercial or industrial vehicles having a load carrying capacity of over 1,000 kilos, nor any motor omnibuses will be admitted. The possible lack of space is the reason for this important decision. In order to allow as many different manufacturers to exhibit it also was decided that agents or branch houses cannot secure space when the cars which they want to exhibit are already listed to be shown by the manufacturers themselves, and vice versa. As in previous years the show also is open to the parts and accessories manufacturers.

Following the example set by the Italian and Belgian shows of recent years the American idea of a uniformly decorated show will be followed and thus the exhibitors in paying for their space will at the same time have paid for the arrangement, illumination, decoration and furnishing of their stand. The price of the space varies from \$12.50 per square meter to \$25 per square meter, all depending on the location. Requests for space must be made by midnight, June 30.



CARS PARKED IN TRIESTE

# Belgium Holds Its Big Hill-Climb

Competition for the Meuse Trophy Produces Interesting Results—Wery in a Nagant is the Star of the Day—Contest Held Over 8-Mile Course and Time Averages 61 Miles an Hour

**B**RUSSELS, May 28—The seventh annual motor car competition for the Meuse trophy—a silver cup offered by the daily journal *Le Meuse*, of Liege—was held a few days ago and won by Wery in a Nagant car, a Belgian product.

As in 1909 and 1910 the course again was the one starting at the foot of l'Hotel de Bethane, in the picturesque little village of that name and ending at the Baraque St. Michel, a few miles from the German border. It is an 8-mile course with a good many winding roads, a few level stretches, none of more than about  $\frac{1}{2}$  mile, and especially a succession of hills having a gradient of from 5 to 12 per cent. At the starting place the course is level for about 150 yards and then, within less than 100 yards, a 12 per cent grade is met. There are a few sharp turns.

While the climbing record of 7:25% established in 1909 by a Mercedes Gordon Bennett racer was not broken, some very fast times were made, the fastest being that of the Springuel car driven by Hautvast. He made the climb in 7:57% or at an average speed of close to 61 miles an hour. The car had a four-cylinder motor 3.5 by 4.7 inches.

Like last year, the general classification was made according to a special formula in which the speed did not count as the deciding factor. Four items were taken into consideration, namely, the weight of the car fully equipped, ready to start with its drivers and passengers on board, the distance in meters covered per second, according to the average speed maintained during the climb, the cylinder capacity and the time of the climb. The first two items were added and then divided by the other two items, which were previously multiplied. There were three classes of cars, racing machines, touring cars and closed cars. The racing cars had to have two seats, one for the driver and one for the mechanic. The touring cars had to have bodies accommodating four passengers, and had to be fully equipped with at least two lamps, guards, windshield, etc.

Instead of leaving it to the contestants to use whatever fuel, or rather buying fuel wherever they wanted, this year the promoters provided the fuel themselves and this essence of a density of 0.690 for 15 degrees and with a minimum caloric power of 11,350 calories was furnished in sealed cans. The night before the climb the contestants had their fuel tanks filled and sealed. Only one single pipe line was allowed to run from the tank to the carburetor and the pipes were stamped and after the climb examined to see if they had not been tampered with. Although

thirty-five cars entered the event only seventeen started as compared with more than forty last year.

Summary:

| RACING CARS                         |      |        |        |  |
|-------------------------------------|------|--------|--------|--|
| Car and Driver                      | Bore | Stroke | Time   |  |
| Springuel, Hautvast.....            | 3.5  | 4.7    | 7:57%  |  |
| Dasse, Dasse.....                   | 4.1  | 5.1    | 8:22%  |  |
| Springuel, Springuel.....           | 2.95 | 4.7    | 9:14%  |  |
| Nagant, Wery.....                   | 3.1  | 4.7    | 9:25%  |  |
| Sava, Berger.....                   | 3.1  | 5.5    | 10:17% |  |
| Excelsior, Langlois.....            | 3.3  | 5.1    | 10:39% |  |
| TOURING CARS                        |      |        |        |  |
| Car and Driver                      | Bore | Stroke | Time   |  |
| Benz, Erle.....                     | 4.3  | 5.9    | 8:10%  |  |
| Imperia, Folleville.....            | 4.1  | 5.1    | 10:45% |  |
| Excelsior, Donnet.....              | 3.3  | 5.1    | 11:35% |  |
| Linon, Jerusalem.....               | 3.7  | 4.7    | 12:00% |  |
| Doriot-Flandrin-Parent, Bastin..... | 3.3  | 4.7    | 12:38% |  |
| CLOSED CARS                         |      |        |        |  |
| Car and Driver                      | Bore | Stroke | Time   |  |
| Springuel, Klinkhamer.....          | 2.95 | 4.5    | 11:36% |  |
| Imperia, Klinkhamer.....            | 4.1  | 5.1    | 12:04% |  |
| Excelsior, de Coninck.....          | 3.3  | 5.1    | 15:22% |  |

## NATIONAL CIRCUIT OFF

New York, June 12—The contest board of the American Automobile Association has issued the following statement regarding the proposed national circuit:

"The original intention of the proposed national circuit was to provide a series of motoring contests following each other in logical sequence, both as to date and geographical location, and to enable a maximum number of participants in each contest at a minimum cost for transportation. Discussion with the racing team managers at Indianapolis on May 30 of the tentative list of contest dates, heretofore published by the contest board as proposed national circuit dates, has served to demonstrate that such dates are too many in number and, beginning on May 30 and extending to November 1, cover too long a period to secure consecutive and continued support of sufficient contestants to justify their designation as national events. No further attempt, therefore, will be made to carry out the national circuit proposition during the 1911 season.

"It should be clearly understood that clubs, associations and individual promoters will therefore make their applications for sanctions for contests in the usual manner, secure their entries and make their own arrangements for such officials as are required under the rules."

## BASLE KILLED AT HAWTHORNE

Chicago, June 12—Racing on dirt tracks around Chicago undoubtedly received its death-blow when the Hawthorne meet was run off Saturday and Sunday. An accident in the first race on Saturday in which Marcel Basle was killed upset the whole program, stopped further racing that day and resulted in a makeshift card being run off yesterday. Six races only were run on the 2 days and the sport was comparatively

tame, the contest being confined mostly to the smaller cars while the star drivers confined themselves to exhibition work.

Basle met his death in the first race on Saturday when he threw a right rear tire on the turn leading out of the back stretch which resulted in his car turning turtle and crushing him beneath it. He was picked up unconscious and died an hour later at the hospital. In the next race Jagersburger broke a rim at the same spot and escaped turning over only because his car was thrown up against a post. He and the machine escaped injury, but the accident following so closely on the fatality caused the officials of the meet to become cautious and to stop further racing for the day. They kept the crowd quiet by exhibitions by Harroun, Burman and de Palma. Following this Promoter Homer George was told that unless he could put the bad turn in condition for racing immediately that there would be no meet on Sunday. By working all night and all Sunday morning the bad turn was in fairly good shape for Sunday afternoon.

Sunday's racing was comparatively tame because many of the entrants withdrew. The officials would take no chances, made the fields small, and shortened the distances. After each event the bad turn was inspected but luckily it held up in fairly good shape. There was only one accident during the afternoon and that came in the last race when Rainey in the Cino

## THE COMING EVENTS

- \*June 16-17—Milwaukee track races, state fair grounds.
- \*June 17—Guttenberg track race, Henry Shafer, promoter.
- \*June 17—Portland hill-climb, Maine Automobile Association.
- \*June 17—Ossining hill-climb, Upper Westchester Automobile Club.
- June 17-18—Reliability run of Indianapolis Automobile Dealers' Association.
- June 18—Vulturette and light-car road races, France.
- \*June 18—Kenosha track race, M. A. Kent, promoter.
- \*June 19—Reliability run of Hyperion Field and Motor Club, Des Moines, Ia.
- \*June 24—Reliability run of St. Louis Auto Club.
- June 25—Grand prix of Automobile Club of France.
- June 25—Endurance contest, Denmark.
- July 1—Belvidere hill-climb, Automobile Club of Maryland.
- July 1 or 6—Baltimore hill-climb, Maryland Auto Club.
- \*July 3-4—Brighton Beach races, New York.
- July 4—Track meet of Kansas City Automobile Dealers' Association, Elm Ridge track.
- July 4—Pottsville, Pa., track race, Schiylkill Co. Centennial.
- July 4—Kansas City track races, Kansas City Auto Club.
- \*July 4—Road race, Kern County Merchants' Association, Bakersfield, Cal.
- July 4—St. Louis reliability run, Missouri Automobile Association.
- July 4-20—Prince Henry tour, Germany.
- July 7—Track race, Taylor Automobile Club, Taylor, Tex.
- July 8 or 15—Track race, Norristown Automobile Club, Philadelphia.
- July 9—French grand prix road races.
- July 14—Reliability run for trucks of Quaker City Motor Club, Philadelphia.
- \*July 14-17—Minneapolis reliability run, Minnesota State Automobile Association.
- July 15—Worcester hill-climb, Worcester Automobile Club.
- July 17-22—Milwaukee reliability run, Wisconsin State Automobile Association.
- July 17-19—Cleveland reliability run, Cleveland News, Cleveland, O.
- \*August 3-4-5—Galveston Beach races, Galveston Automobile Club.

\* Sanction already issued



threw a tire at the bad turn but escaped injury. The race was stopped after it had gone 3 miles because of this, but later was resumed with the cars in the same position in which they were running at the time of the Rainey accident and the remaining 7 miles completed. Summary:

#### SATURDAY'S SUMMARIES

Five Miles, Class C, Nonstock, 161-230 Class—Kulick, Ford, won; M. Roberts, Abbott-Detroit, second; Boersch, Warren-Detroit, third. Time, 5:36%.

Five Miles, Class C, Nonstock, 231-300 Class, First Heat—Rainey, Cino, won; Dawson, Marmon, second; Monckmeier, Staver-Chicago, third. Time, 5:28%.

Second Heat—Jagersburger, Case, won; Hughes, Mercer, second; Robillard, Staver-Chicago, third. Time, 5:26%.

Final postponed to Sunday.

Exhibition Miles—De Palma, Simplex, :56%; Burman, Blitzen Benz, :53%.

#### SUNDAY'S SUMMARIES

Five Miles, Class C, Nonstock, 161-230 Class. Final heat postponed from Saturday and distance reduced to 3 miles—Schillo, Mercer, won; Rainey, Cino, second; Jagersburger, Case, third. Time, 3:22%.

Five Miles, Class C, Nonstock, 231-300 Class. First heat 3 miles—Donnelly, Cino, won; Jagersburger, Case, second. Time, 3:14%.

Second Heat—Rainey, Cino, won; Hughes, Mercer, second. Time, 3:16%.

Final Heat, 3 Miles—Donnelly, Cino, won; Hughes, Mercer, second; Rainey, Cino, third. Time, 3:15%.

Five-Mile Match Race—De Palma, Simplex, won; Knipper, Benz, second. Time, 5:14%.

Five Miles, Class C, Nonstock, 301-600 Class—Burt, Marquette-Bulck, won; Knipper, National, second. Hearne, Flat, Buck, National also started.

Fifty Miles, Class 2, 231-300 Class, Nonstock. Distance Reduced to 10 Miles—Jagersburger, Case, won; Hughes, Mercer, second; Donnelly, Cino, third. Time for 7 miles, 7:23%.

Mile Exhibitions—Burman, Benz, :53%; De Palmer, Simplex, :55.

## ON MOTOR CALENDAR

August 12—Reliability run of Quaker City Motor Club, Philadelphia.

August 25-26—Elgin road races, Chicago Motor Club.

September 1—Reliability run for trucks of Chicago Motor Club, Chicago.

September 1—Oklahoma reliability run, Daily Oklahoman.

September 2-4—Brighton Beach races, New York.

September 4—Denver track race, Denver Motor Club.

September 7-8—Philadelphia track race, Philadelphia Automobile Trade Association.

September 7-8-9—Track meet, Minnesota State Automobile Association, Hamline track, Minnesota.

September 12-13—Track meet, State Automobile Association, Grand Rapids, Mich.

September 15—Track meet, Appalachian exposition, Knoxville, Tenn.

September 16—Track meet, Automobile Club and Dealers, Syracuse, N. Y.

September 23—Road race, Lowell, Mass., Lowell Automobile Club.

October 3-7—Track race, Danbury, Conn., Agricultural Society.

October 7—Fairmount Park road race, Philadelphia.

October 9-13—1,000-mile reliability, Chicago Motor Club.

October 16-18—Reliability run of Harrisburg Motor Club.

November 1—Track meet of Waco Automobile Club, Waco, Tex.

November 2-3-4—Reliability run of Quaker City Motor Club, Philadelphia.

November 9-11—Track meet, San Antonio Automobile Club.

November 7-10—Phoenix road race, Maricopa Automobile Club.

November 10—Track meet of Maricopa Automobile Club, Phoenix, Ariz.

November 27—Vanderbilt road race, Savannah, Ga.

November 29—Grand prix race, Savannah, Ga.

November 30-December 2-3—Los Angeles motordrome.

December 25-26—Los Angeles motordrome.

## Details Arranged for Western Tour

Twin City-to-Helena Reliability Will Start About July 20, Instead of the 14th—Twenty-Eight Entries Already Secured and Affair Will Last 8 Days—Special Train Is Arranged for

MINNEAPOLIS, Minn., June 10—With Thursday, July 20, finally named as the date the Twin City-to-Helena tour will be started, interest in the coming event is beginning to show up in all corners. Final preliminary details completed at the meeting of the state association Wednesday night are evidence that the trip will be one of the most interesting in the annals of motor contests held in the United States.

While the date originally planned was July 14, this having been incorporated in the sanction, Dr. C. E. Dutton, representative of the American Automobile contest board, chairman of the state contest committee and referee on the run, anticipates no difficulty in having this changed. It was believed advisable to alter it so that the Sunday control could be established at Devils Lake, N. D.

Twenty-eight entrants, it was announced, already have made known their intentions. Of these twenty will go as contestants, while the remaining eight will be non-contestants. Most of them are Minneapolis and St. Paul owners. Fargo has promised at least two contesting cars and possibly three. In addition, the Fargo club will send twenty-five non-contesting cars to Devils Lake on the third day.

Too much cannot be said of the side trips planned for the tourists. The park-to-park road from Glacier park on the Canadian boundary, to the Yellowstone, on the southern border, scenery will be found that is not equaled even by the marvelous Alps. After leaving Glacier the road known as the national scenic highway is followed down the Flathead river to Kalispell. Passing around the west shore of Flathead lake, which is 25 miles long and 10 wide, and from Polson, at the foot, across the Flathead Indian reservation for 35 miles, the travelers will be greeted by sights which no pen picture can do justice. For this distance the Mission range will be followed along the foothills. At their foot is a splendid motoring road. The route goes by way of Missoula and other flourishing cities.

The first night control has been established at Alexandria, where the tourists will sleep aboard the Pullmans attached to the Great Northern special which President L. W. Hill has arranged to accompany the motor caravan. At the end of the second day's run Fargo will be the headquarters. Devils Lake will be reached Saturday night, the third day out, where Sunday will be passed.

Berthold will be the fourth night stop, and on the morning of the fifth the cars will early cross the Montana line. For the

first time the tourists will sleep under the blue Montana skies, within the limits of Culbertson. An hour's stop will be made at the government Indian reservation on the morning of the sixth day. Here the visitors will be treated to a real Indian pow-wow which the agent in charge has offered. Malta will be reached that night.

The seventh day will find the travelers on their longest run, it being 200 miles to Great Falls. But the roads between the two points are reported to be excellent and conducive to any speed the drivers may deem necessary. After a 110-mile drive the tourists will find themselves at the western destination, Helena being reached early in the afternoon of July 28, according to the schedule. Some hill-climbing stunts, however, will have to be performed before the end of the long grind. Sullivan's hill, a few miles this side of Helena, is the worst of these. Guides will be stationed at top and bottom for the purpose of stopping traffic while the motorists are grinding their way through. Louis W. Hill, who is the chief promoter, has also promised to have men posted at numerous railway crossings as well as at Wolf canyon, where some difficulty might arise.

## QUAKERS ENTERTAIN ORPHANS

Philadelphia, Pa., June 7—As guests of the members of the Quaker City Motor Club and public-spirited citizens, about 1,000 kiddies from various institutions for poor children in Philadelphia started this morning on a joy ride in the truest sense of that much abused term, the objective point being Willow Grove, a run of about 15 miles from this city. Nearly 100 cars were placed at the disposal of the club and assembled at the Hotel Walton, whence the drivers rounded up the children, each car starting on the trip as soon as loaded. It was a joyous occasion for the youngsters, and their happy little faces as they were whirled through the city streets and out the picturesque old York road was ample compensation for any inconvenience the owner of the car might have sustained by reason of his donation. At Willow Grove park a luncheon was served under the trees and the many park amusements thrown open free of charge to the children during the noon hour.

The fact that the day was a most threatening one and that it promised to rain at any moment did not distract one iota from the enjoyment, and as it eventually cleared up, the kiddies were in their glory. Late this afternoon the children were bundled into the big touring cars again and returned safe and sound.

# Effects of Traffic on Streets of Paris

PARIS, May 25—It is an easy and safe pastime for antimotorists to accuse motor cars of spoiling the highways. It is safe because definite proof to the contrary is difficult to obtain, isolated instances of road destruction being of no real value, the only final test being the observation of two parallel highways, used respectively and exclusively by animal and mechanical traction. There is only one such highway in the world, and as it was not created specially to prove the comparative destructiveness of horses and motors, it has not yielded all the lessons that might have been obtained.

Five years ago Chief of Paris Police Lepine decided that traffic would be facilitated in the Avenue des Champs-Elysees if all motor cars were obliged to use the central track defined by the two rows of standards, while horse-drawn vehicles occupied the two remaining tracks between the footpaths and the central shelters. From a traffic standpoint the regulation was a wise one, for it allowed fast-moving motor vehicles to run up and down the avenue at a speed which was impossible under mixed conditions, and it removed confusion by having a stream of traffic in one direction only in the two zones be-

*Interesting comparisons are to be found on the Champs-Elysees, city officials formally reporting that the section used by motor cars has been improved by motor traffic, whereas horses have chipped up blocks on their side*

tween the footpaths and the central islands. After 5 years' experience everyone is so convinced of the value of the system that a change back to the old order is never thought of. Unfortunately all avenues in Paris are not sufficiently wide to allow of further application of the system.

## Improved by Traffic

For 5 years one portion of the Avenue des Champs-Elysees has been used exclusively by motor cars, while two tracks of equal width in the same avenue have carried an equal amount of horse-drawn traffic. Naturally one asks, "What has been the result? How have the two tracks stood up to their work?" Had the change been made as an experiment in the wearing qualities of road surface under different forms of traffic, it would have been possible to obtain complete data. But the order was given by the police in the interests of traffic movement, and it was

not until a certain time had elapsed that the road repair department realized what a revolution was in progress in their domain.

The road engineers of Paris are not motorists; they have no more sympathy for the mechanical than for the animal. Yet when a Motor Age representative called upon Chief Road Engineer Tur and asked what conclusions had been drawn from the 5 years' experience in the Champs-Elysees, he replied: "The motor car is our salvation."

The Champs-Elysees is an avenue having a uniform width of 92 feet. It was originally paved with granite setts; on these a cement foundation was placed, and it was laid with soft pine wood blocks from the Landes district. The lower portion, from the Place de la Concorde to the Rond Point, which is entirely level, was relaid in 1908-09, thus the central track never has been used by other than motor traffic. The upper portion having been laid in 1904, had 2 years of mixed traffic before the division of the animal from the mechanical took place.

## Condition of Champs-Elysees

"We are fully satisfied," declared Chief Engineer Tur, "that the motor car solves the problem of street maintenance. Rubber-shod motor traffic is ideal. Thus, after more than 2 years' hard service, carrying the fastest and most intense traffic of any city street, the lower portion of the Champs-Elysees is today in ideal condition. The 7-year-old wood blocks which for 5 years have been used by motors only, also are in excellent condition. Wood blocks will carry heavy loads provided the shocks are not violent; with rubber and pneumatic tires all pounding is eliminated, there being a cushioning effect between the load and road which is wonderfully conducive to the life of the latter. The wear of the wood surface is very slight and evenly distributed: it is merely a polishing and not a filing away of the road. Further, motor cars preserve the roads they run over. There always is a slight leakage of oil; it is not visible from any one car, yet the aggregate from the thousands of vehicles passing every day is sufficient to impregnate the wood, making it thoroughly waterproof and lengthening its life enormously. The presence of oil is evident in the Champs-Elysees by the black color of the roadway reserved to motor vehicles. The blackening is not even: it is much more pronounced at the top of the hill near the Etoile, and at the bottom where the avenue runs into the Place de la Concorde. From this it would appear that the oily exhaust has more to do with the blackening of the roadway than actual drippings from the motor or transmission, for on the hill motors smoke a little more than when



BIRD'S-EYE VIEW OF AVENUE DES CHAMPS-ELYSEES, PARIS. BETWEEN DOTTED LINES THE MOTOR TRAFFIC IS CONFINED



running light, and before entering the Place de la Concorde they are frequently stopped for cross traffic and naturally smoke a little when being accelerated. But whether the oil comes from drippings or from the exhaust, it is patent that the motor track is automatically oiled and that this oiling is a wonderful preservative of the wood blocks."

#### Horses Injure Surface

The charge against the horse really is a serious one. "These two tracks which never have been used by motors have their surface picked out and rotted away," says the chief engineer. "Deposits left by horses are just so much strong acid eating away the surface of the wood blocks. The horses' hoofs do the rest. Holes are formed, water lodges in them and the surface is quickly ruined. This is evident to any observer, for while the central track rarely is repaired and always is in a perfectly smooth polished condition, the two side portions are in constant need of repair, are difficult to keep clean, and always have a rough picked out surface. Motor cars are responsible for a substantial economy in the road maintenance accounts; further, they bring no dirt and by reason of their suction at high speeds automatically clean the highway for us, thus realizing additional economy."

Chief Engineer Tur admitted that his appreciation of the motor vehicle only applied to cars shod with pneumatic or solid rubber tires. Motor trucks with steel-shod wheels were destructive. They had an example of this in a number of steam trucks weighing altogether 14 tons each, which destroyed all the roads they used, whether made of wood, macadam, or granite blocks. But if these destroyed the roads they also destroyed themselves, and probably this would finally cause their withdrawal. Heavy trucks shod with solid rubber tires appeared to have no ill ef-



MOTOR CAR SECTION OF CHAMPS-ELYSEES. SURFACE IS POLISHED AS SMOOTH AS A BALLROOM FLOOR, NO REPAIRS HAVING BEEN MADE IN 5 YEARS

fects on wood paving, as is shown by the daily passage of a number of motor buses in the Avenue des Champs-Élysées. High speed, too, did not appear to cause any damage, for although the Champs-Élysées is in the center of the city, its width and the police regulations allow cars to travel, at certain hours, at a very high rate of speed. Chief Engineer Tur made it clear that the advantages of motor traffic only applied to wood pavement.

#### Saves City Money

From District Engineer Bellenger, in sole charge of the Champs-Élysées, it was possible to get more detailed information regarding the wear of the horse and the motor tracks. The city accounts only showed the amount spent in repairs for the whole of the avenue, and did not differentiate between the horse and the motor sections.

"I am convinced, however," stated Bellenger, "that for every 2 square yards

of patching on the motor track we have 8 square yards of the horse track to relay. Undoubtedly motor cars preserve city streets by their smooth rolling motion and the drippings of oil. The surface rarely is pitted, but when we do take out a few blocks for a local repair we find that the lower portion of the wood is in worse condition than the surface, for when water has once penetrated it attacks the base of the blocks but is powerless against the top part, owing to the presence of the oil. Horses undoubtedly do an enormous amount of damage by the picking effect of their hoofs. They take away the surface—and the harder the wood the more easily they chip it away—holes are formed, rain stands in them and the whole surface is deteriorated. The manner in which the motor track of the Champs-Élysées has been preserved has so impressed me that I intend to propose the oiling of all wood-paved streets in my district."

#### Motoring Improves Streets

The chief of the street-cleaning department for this portion of the city declared that they had made substantial economies since the dividing of the traffic in the Champs-Élysées.

"If the horses were abolished the streets would rarely need sweeping. Motor cars make no dirt, and they have a tendency to scatter the refuse brought by horses and the drippings from carts into the gutters, where it is readily collected by the street sweepers. Formerly we washed the whole of the surface of the Champs-Élysées every morning, first thoroughly soaking it with water, then scraping it with rubber brushes. Now the central portion is so clean that it does not need to be washed; we slightly water it, then sweep it, although even this is not really necessary. Formerly our men spent 3¼ hours every morning in cleaning the Champs-Élysées; now they do the same work in 2½ hours."



ONE OF THE SIDE PORTIONS OF CHAMPS-ELYSEES, PARIS, USED EXCLUSIVELY FOR HORSE-DRAWN TRAFFIC. NOTE THE DIRTY AND ROUGH CONDITION OF THE WOOD PAVEMENT, THE SURFACE OF WHICH IS CUT UP BY HORSES' HOOF



## GYPSYING IN MOTOR CAR

Few Know the Joys of Roughing it in  
Beautiful New England, Stopping Where Fancy Dictates  
and With no Thought of Hotels, or Landlords or the Clock

By Anna, Helpmate to Nathan

**B**OTH my husband and myself come from good old Yankee stock and consequently we are apt to try to get the full worth of our money at all times, so when we bought our first car we planned to save enough by using it in our business to pay for the pleasure we could get out of it out of business hours. This we certainly were able to do. We soon found that we especially enjoyed making long trips or sight-seeing tours around the country, and as our work car was a low-powered machine it was not very well suited to such a purpose. After a year in which we worked our passage, as my husband called it, we decided to buy a 30-horsepower machine to use only for touring, and we have since managed to see a good part of New England, and at a small expense, as I am going to show you, hoping that I may enable some others, who would not be able to stand the expenses customary to be expected on such trips, to see the beautiful scenery here without spending much more than if they stayed at home.

We always had been used to spending a good many days of the summer working on a small farm of ours, far enough from the city to necessitate carrying dinner, and we soon built a fireplace of stones and cooked our noon meal out of doors, so that as we began to take all-day trips in our machine we often, in cool weather, did the same thing, as it took only a minute to build a little fireplace, and we would make hot coffee if nothing more. The exercise in the open air necessary to prepare our meal sent us on our way warmer than if we had sat still in a warm room while



"A WORD ABOUT THE FIRE"

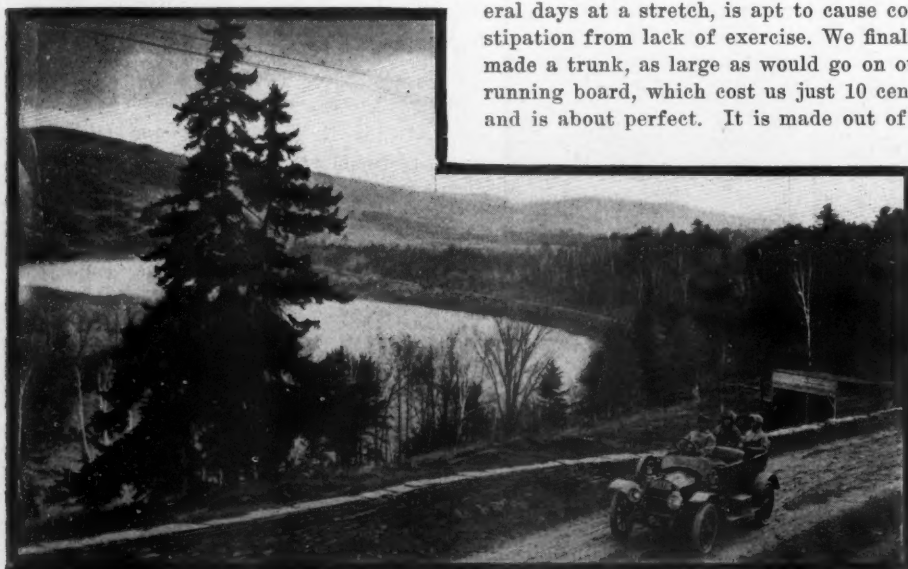
eating, as exercise is a thing the motorist must be careful to plan for in order to keep in good condition.

By carrying cold boiled potatoes along and buying a steak at the nearest town we could have a hearty meal, and not spend any more time in preparing and eating it than we would in going to a hotel or restaurant. In fact, we always allowed about 2 hours for a hotel dinner, and even when we cook boiled potatoes, peas, steak and coffee we can get away in an hour and a half with the dishes all washed. Besides saving time, we are able to stay out of doors 2 or 3 hours longer a day than if we ate our meals at hotels. We also found that it was more healthful for us to spend the time walking around and bending over as we would have to in preparing our food, as riding and sitting constantly, for several days at a stretch, is apt to cause constipation from lack of exercise. We finally made a trunk, as large as would go on our running board, which cost us just 10 cents and is about perfect. It is made out of a

wooden cracker box and is covered with waterproof cloth which we cut from the side curtains belonging to the little car, as we never used them. The top cover laps over on three sides of the box, and fastens down with the brass snaps which were used on the curtains from which it was made. It is just large enough to take in a frying pan crossways, and we carry also a long-handled saucepan for coffee and a potato kettle.

I bought a set of enameledware, light blue on the outside and white inside, which besides being non-breakable is very pretty. The set consists of smooth-bottomed, shallow pie plates to eat off of, flat-bottomed drinking cups with handles, and little round bowls for cereal at breakfast, or vegetables or ice cream at dinner. The cups will not tip over even if set down on uneven ground, and the little bowls will take up but a small space place on one side of the dinner plates when eating without a table. With this outfit and a large jar or jug for water I would be able to live in comfort and get all my meals on a trip for any length of time, and now we are indoors only while we are asleep, and except for paying for a room at a hotel at night and garage for our car, our living expenses are no more than they would be if we stayed at home.

We have found it to be a comfort to keep the water jug full at all times, and to carry a small bundle of pine kindling split up fine. We use old packing boxes for this, and a little will go a long ways. Sometimes we do not need a bit; then for breakfast, if the fuel which we find is damp, we can use some of our own to start the fire. By always having on hand water and fuel we can sometimes prepare



OVERLOOKING THE BEAUTIFUL CONNECTICUT RIVER IN VERMONT



# MOTORIZING DARBY AND JOAN

Demonstrate Possibilities of the Motor  
Car as a Means of Conveyance in Getting Near to  
Nature and Roughing it Amid Picturesque Surroundings



"WE USUALLY BUILT OUR FIREPLACE ON CLEAN DIRT"

a meal while a tire trouble is being doctored, or at pretty spots.

I always shall remember a beautiful view of the Connecticut river and the New Hampshire hills just above Brattleboro, which we found time to enjoy one glorious June afternoon in just this way. We came around a corner and found the enchanting picture spread out before us as we so often do, and I said, "We must stop right here and enjoy this." My husband stopped the car and after we had all looked and exclaimed at the beauty of the scene, I proposed supper, but my husband said, "Oh, no; it is too early." It was about 5:30, so I did not insist and we were just going to start on when, upon looking at the tires to see if they were all right, behold! a flat one. "Aha!" I said, "we have supper here after all." So out came the baked beans to be warmed, the guest made the fireplace, I measured out the coffee and the other woman of the party got out the dishes and spread the table, while my husband changed tires, and we had supper and watched the sun go down on the hills of old New Hampshire, in as beautiful a spot as could have been found anywhere.

We depend on the stores in the towns through which we pass for bread, meat, vegetables, cream, etc., just as we would buy at home. I usually carry a big loaf of moist cake, which will last us generally through the whole trip. We take pie for the first dinner, and after that depend on fruit or ice cream for dessert. Ice cream is an ideal food for the motorist, as it is nourishing, allays thirst and does not seem to cause that stuffed-up, solid feeling inside that too much heavy food will create when riding steadily for several days.

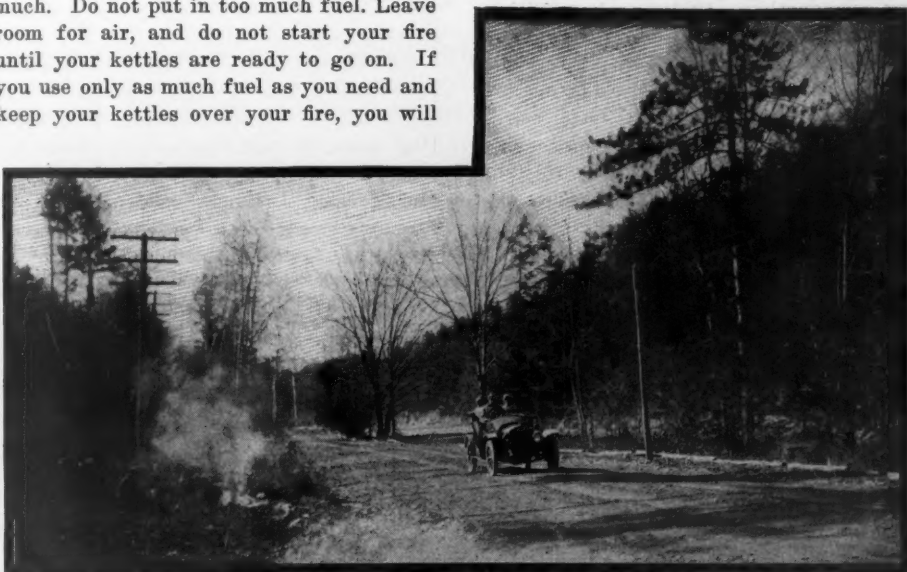
A word now about the fire. Try to pick

out a place to stop for a meal where it cannot do any harm to build a fire, as summer wanderers are responsible for many losses from fire which only carelessness is to blame for. We usually build our fireplace on clean dirt, right at the side of the road, if we can find a place on some cross-road where there will not be too much passing. You need only about four or six stones, as you do not want a large space. We arrange two rows of stones, 6 or 8 inches high, and not more than 8 inches apart at the bottom. The stones must come near enough together at the top so that the kettle and saucepan will fit on securely. Be sure to fit on the kettles before building your fire, as you can then move the stones around until they sit steady, whereas after the fire is started it is not very easy to try to change around much. Do not put in too much fuel. Leave room for air, and do not start your fire until your kettles are ready to go on. If you use only as much fuel as you need and keep your kettles over your fire, you will

not cause danger at any time, and even horses will not shy at you when they go by. We never have yet had a cross word said to us, although people often look at us and grin as they ride past and see us bending over our frying pan, and one rich old man up in the Berkshires near Lenox clapped his hands as he saw us enjoying dinner by the side of the road one day.

When your meal is cooked, before you sit down to eat, fill the potato kettle with water and set over the remains of the fire for dishwater. It will be ready about the time you are ready for it, and after washing the dishes, be sure to pour the dishwater on the coals left in the fireplace, and if it does not seem safe to leave then, cover fresh dirt over the coals, or get more water and put on; so you can be sure to leave everything safe. We always burn up all rubbish, papers, etc., so as to leave everything clean around. It takes only a minute, and it seems much nicer to look back and see everything just as we found it. Quite often, at some pretty spot, we find the rubbish from lunches which people have eaten long before, and which just about spoils the place for us.

We like to ride an hour or so before breakfast, and an hour after supper, and this we can do easily when we get our own meals. I feel sure we can make a good many extra miles a day, just because we are not dependent on a city for a meal, but can have one any time we wish. A few things, such as ice for butter, we have to get along without, but we always have been able to keep our steak or chops, bought Saturday night, until Sunday noon without ice and never yet had any spoil.



ALONG THE AMMONUSIC RIVER IN NEW HAMPSHIRE



## Routes and Touring Information

### SEES TROUBLE IN PARK TOURS

**RED OAK, Ia.**—Editor Motor Age—I was very much interested in the fine illustrated article in Motor Age, issue May 18, concerning the Yellowstone park, but it seems to me there are a few things in this and in the pictures which may be a little misleading.

In the first place, it would be a mistake to suppose that the few samples of fine roads shown in the illustrations are anything typical of the entire 160 miles of roadway on the standard route. There are a very few fine stretches of broad, well-kept macadam road, it is true, but the greater portion of the road as yet is quite unimproved, very narrow, and some of it quite rough.

But this would not be the greatest obstacle to motor cars touring the park. The fact is that during every day in the season there are hundreds of coaches and other conveyances making the round over the road, and the motorist would of necessity have to meet or pass these, and in a large proportion of the places the road is too narrow to admit of vehicles passing one another. Under such conditions, I should think there would be very little satisfaction in motoring through the park.

I do not take this view from an anti-motor car standpoint, for I am a touring enthusiast myself, having been in the sport a long time in this country and having made three tours abroad in my own car.

I also made a tour of the Yellowstone park a year ago and I cannot help but believe that the authorities are quite right in excluding motor cars from both Yellowstone and Yosemite parks under present conditions.—Thomas D. Murphy.

### BILLINGS, MONT., TO DENVER

**Billings, Mont.**—Editor Motor Age—It is my desire to go overland from Billings, Mont., to Denver, Colo., and not being familiar with the best route to take wish Motor Age would give me the desired information.—W. A. Walters.

Complete itinerary with a map of the route desired appeared in Motor Age, issue May 18, pages 18 to 23 inclusive. This information was included in the Yellowstone park itineraries and side trips in this section of the country.

### CHICAGO TO NIAGARA FALLS

**Elmhurst, Ill.**—Editor Motor Age—Will Motor Age kindly outline a route between Chicago and Niagara Falls, also designate the best cities to stop at over night, so as to secure good hotel accommodations? We plan to stop at South Bend the first night. We should like to return by a different route if possible.—H. F. L.

On the way to South Bend the popular road takes you through Jackson Park, Bryn Mawr, South Chicago, Hammond, Highlands, Hobart, Valparaiso, Westville, LaPorte, and New Carlisle. In Routes and Touring Information department of

Motor Age issue for April 20 in answer to an inquiry from H. F. Kendall, of Mattoon, Ill., you will find the itinerary between South Bend, Ind., and Buffalo, N. Y. It is only a distance of 22 miles to Niagara through Tonawanda.

Now, motoring back on the Canadian side via Hamilton and London to Detroit you will pass through St. Davids, Homer, St. Catharines, Jordan, Beamsville, Grimsby, Winona, Stoney Creek, Hamilton, Ancaster, Alberton, Brantford, Woodstock, Ingersoll, Thamesford, London, Lambeth, Delaware, Strathburn, Wardsville, Clachan, Ridgetown, Blenheim, Dealtown, Leamington, Ruthven, Essex, and Windsor. The best road from Detroit to South Bend, although the longest, is through Niles, Summerville, Pokagon, Dowagiac, Decatur, Paw Paw, Kalamazoo, Galesburg, Battle Creek, Marshall, Albion, Parma, Jackson, Chelsea, Ann Arbor, Ypsilanti, Denton, Canton, Wayne, and Dearborn. This longer route presents better roads and hotel accommodations than can be found on the shorter one.

To take in Port Huron would involve a run of 123 miles from London, Canada, to Detroit, Mich., and you will find well-kept gravel roads practically all the way. The towns passed through are Hyde Park, Adelaide, Warwick Village, Kertch, Sarnia, Port Huron, St. Clair, Muttonville, and Mount Clemens to Detroit.

To make each day's run about 100 miles, which is about the distance from Chicago to South Bend, the next night's stop would be Bryan, O., the third might be Sandusky, if you care to make the 125 miles, the fourth would be Cleveland, with only a short run of 62 miles, the fifth Erie, and the sixth Niagara Falls. In order to make a night stop at Toledo it would make your third day's run 67 miles and bring you in Cleveland at the end of the fourth day. Niagara Falls to Hamilton is only 50 miles, and from there to London 80 miles, to Port Huron 63 miles and to Detroit 60 miles. You might stop at London and then Detroit the second



TWO OPTIONAL ROUTES FROM CHICAGO TO NIAGARA FALLS



night, Battle Creek the third, South Bend the fourth and arrive in Chicago for the fifth.

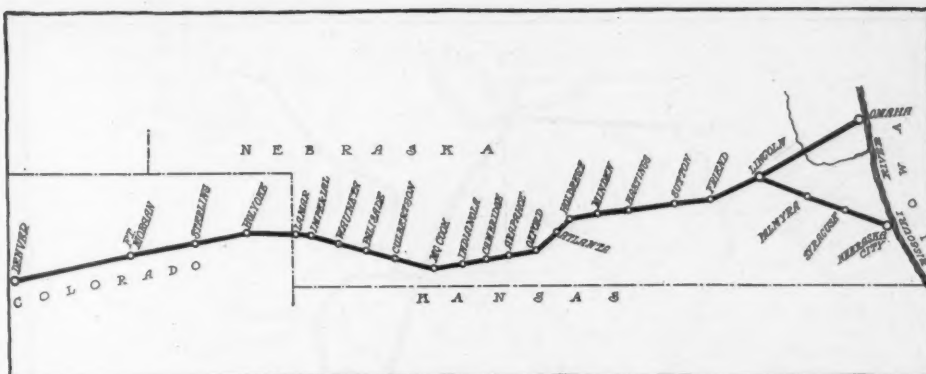
Detailed directions for this route and diverging ones can be found in the Automobile Blue Book as well as the mileage from town to town, hotels, garages and points of interest along the way.

#### OFFICIAL DENVER-OMAHA ROUTE

Minden, Neb.—Editor Motor Age—The official route of the Denver-Omaha Good Roads Association passes from Omaha and Nebraska City on the east, through Friend, Sutton, Hastings, Minden, Holdrege, Oxford, McCook, Imperial, Holyoke, Colo., Sterling, Ft. Morgan then to Denver, the total mileage from Nebraska City to Denver being 563.9 miles, and 30 miles shorter than any other route. This route, which is now recognized as the official public highway to Denver, is by no means a new one. It has long been known as the best route across the state of Nebraska.

From Lincoln this road reaches out over a vast tableland to the eastern boundary of the state. There are practically no hills or hollows, the largest grade being 16 per cent. It is well known that no sand is encountered throughout the route in Nebraska. The road is mostly clay and being well worked by the various counties is hard packed and a veritable pavement. There are stretches of 60 and 80 miles where one can safely open up the car to 40 and 50 miles an hour. Leaving Nebraska City, the entire route can be covered without a gear shift.

The Omaha-Denver route connects with the river-to-river road running from Davenport on the Mississippi river, via Des Moines, to Council Bluffs on the Missouri river, opposite Omaha, Neb. A connection also is made with the Waubesa trail of Iowa, which runs from Keokuk, Ia., on the Mississippi river to Nebraska City, Neb., on the Missouri river. This road from Omaha and Nebraska City to Denver is now in excellent condition for motor travel. Many tourists are using the route at this season, and pronounce it the best in the



ROUTE OF OFFICIAL OMAHA-DENVER ROUTE

state of Nebraska. The route has been surveyed and maps and guides prepared. From Dorchester to Holdrege, a distance of about 130 miles, the road is almost straight with not a grade worth mentioning. The culverts, railroad crossings and bridges are good.

A uniform system of marking the route has been adopted, and suitable signs locating particular places of note and interest to the tourist are to be erected. An 18-inch band will be placed 6 feet above the ground on the telephone poles, and in places where there are no poles along the roadway, 5-foot poles with painted tops will be driven in the ground. This white band will be painted on one pole in every mile on the straight-away route, and at turns the three poles leading to and leaving will be marked.

Along the route the farmers are greatly interested and have pledged themselves to the upkeep of the particular strip by their property. The King drag is being used and the soil is such that dragging will keep the road in very good condition.—George Parisoe, secretary Denver-Omaha Good Roads Association.

#### NEW ORLEANS TO CLINTON, IA.

Will Motor Age kindly put me in touch with the best motor route from New Orleans, via Natchez to Louisville, Ky., and points north of the Ohio, thence to Clinton, Ia., where I expect to meet friends

for a tour in New England?—R. F. Learned.

Motor Age suggests that leaving New Orleans you travel through La Place, Darrow, Baton Rouge, Greensburg, Kentwood, Johnston, Norfield, Brookhaven, Beauregard, Hazelhurst, Terry, Jackson, Madison, Canton, Pickens, Goodman, Lexington, Greenwood, Glendora, Whitehead, Sumner, Tutwiller, Clover Hill, Coahoma, Lula, Dundee, Clayton, Tunica, Hollywood, Robinsonville, Lake Cormorant and Memphis, Tenn. From Memphis to Nashville you have the choice of two routes: One by way of Sheffield, Ala., being the Glidden tour route of 1910, which passes through Germantown, Forest Hill, Piper-ton, Rossville, Moscow, La Grange, Grand Junction, Saulsbury, Rogers Springs, Corinth, Burnsville, Iuka, Cherokee, Barton, Sheffield, Florence, Greenhill, Loretto, Pleasant Point, Dunn, Lawrenceburg, Summertown, Rockdale, Sandy Hook, Ridley, Columbia, Franklin, Brentwood and Nashville.

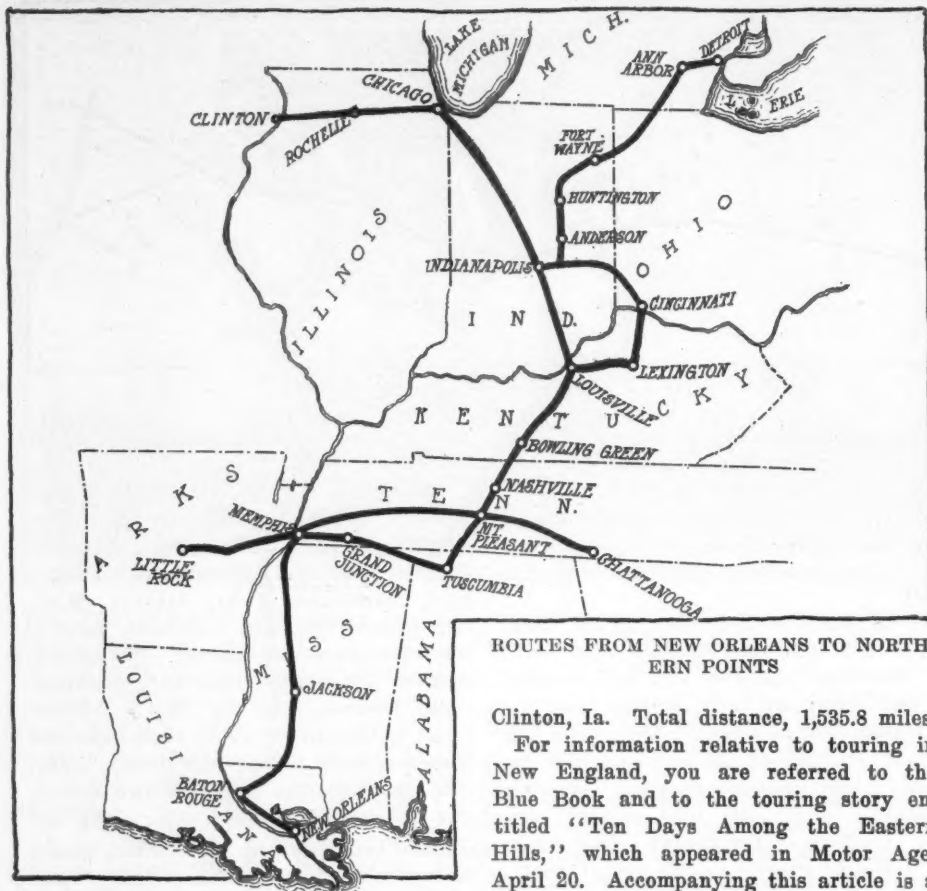
The alternate route from Memphis is through Brownsville, Jackson, Perryville, Mt. Pleasant, Columbia, Franklin, Nashville. From Nashville to Louisville the route lies through Millersville, White House, Mitchell, Bowling Green, Glasgow Junction, Cave City, Bear Wallow, Uno, Canner, Magnolia, Buffalo, New Haven, Smithville, Fern Creek, Louisville. Motor

#### HUNTING COYOTES

One of the pleasures of a tour through the Mohave desert in southern California is coyote hunting from the car. It requires sharp eyes and quick shooting to bring down the fleet-footed animals, especially as in places the country is so broken and overgrown with sagebrush and yucca trees that it is impossible to follow them off the main trail. In the illustration on the opposite page one of the hunters is on the lookout for game.

The trees in these two views are the curious yucca trees, called Adam's needles on account of their sharp spines. The Indians use the inner leaves and fibers for baskets, sandals and other items in their domestic economy.





ROUTES FROM NEW ORLEANS TO NORTHERN POINTS

Clinton, Ia. Total distance, 1,535.8 miles.

For information relative to touring in New England, you are referred to the Blue Book and to the touring story entitled "Ten Days Among the Eastern Hills," which appeared in Motor Age, April 20. Accompanying this article is a touring map of New England, showing three ideal motor tours in the White and Adirondack mountains.

#### PENNSYLVANIA-WEST VIRGINIA TOUR

Ravenswood, W. Va.—Editor Motor Age—Through the Routes and Touring Information Department will Motor Age advise me as to the character of the roads from Martinsburg, W. Va., in the valley of Virginia, thence through the Shenandoah valley, passing through Winchester, Strasburg, Woodstock, Harrisburg, Staunton, Lexington, New Castle and Roanoke; the mileage of this route, the facilities at the points named for obtaining gasoline, lubricating oil and supplies en route? Also the distance from Staunton to Richmond by

way of Charlottesville, with the character of the public road and if suitable to motor car travel. Also I would like description of the character of the road from Gettysburg, Pa., to Cleveland by best route, with mileage and itinerary. Please name the towns to be passed through to Cleveland.—Charles L. Brown.

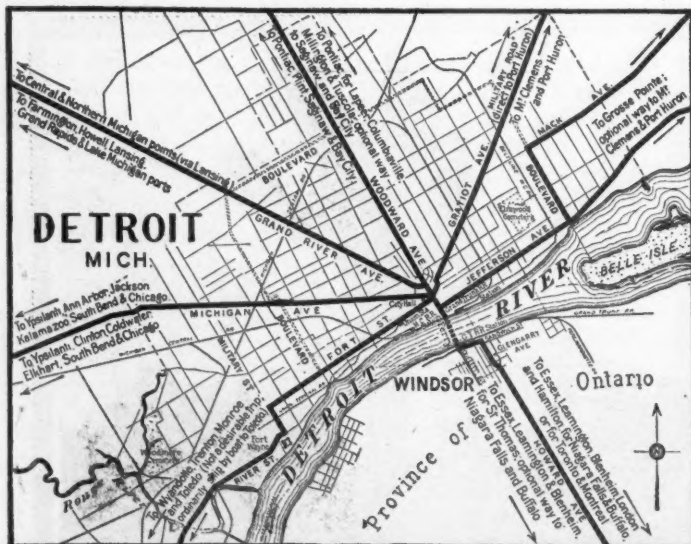
The route from Martinsburg to Roanoke is what is known as the national highway, and is the route over which the dedicatory tour and reliability contest conducted by the New York Herald and the Atlanta Journal was made in the fall of 1909 and 1910. The complete itinerary, as given by the Blue Book, is as follows: Martinsburg, Winchester, Stephen City, Middletown, Strassburg, Maurertown, Woodstock, Edinburg, Mount Jackson, New Market, Lacey Springs, Harrisonburg, Mount Crawford, Burkstown, Verona, Staunton, Minte Springs, Breenville, Midway, Fairfield, Lexington, Fancy Hill, Natural Bridge, Buchanan, Troutville, Cloverdale, Roanoke.

The road between Martinsville and Roanoke is a rough mountainous one. In fact, continuous stretches of first-class roads in the South are very scarce. Any one contemplating a trip over southern roads should be well provided with block and tackle, and it would be well to have a car with a 60-inch tread. There are many toll-gates on this route and at each a toll of 15 cents is charged. The Blue Book states that it is necessary to register name, residence and license number with each gate keeper, and in order to facilitate matters suggests that 15 cents be placed in nineteen envelopes, the name, residence and license number appearing on the outside, and at each toll-gate hand the keeper an envelope.

The distance from Staunton to Richmond via Charlottesville is approximately 120 miles over fairly good dirt roads, somewhat winding and hilly. The last 13 miles of road into Richmond are macadam. The route lies through Staunton, Waynesboro, Rock Fish Gap, Charlottesville, Keswick Station, Whitlock Station, Louisa Courthouse, Cuckoo, Montpelier, Richmond. At

Age suggests that while in Cave City you take time to visit Mammoth Cave, which is only about 7 miles distant. Another interesting side trip would be to the battlefields near Chattanooga, branching off from Mt. Pleasant through Manchester and Jasper.

From Louisville to Indianapolis, Ind., pass through New Albany, Sellersburg, Henryville, Vienna, Seymour, Columbus, Taylorsville, Amity, Franklin, Greenwood, Southport, Indianapolis. From Indianapolis to Chicago follow the route outlined with a map in Motor Age, issue May 11, page 20. Chicago to Clinton is through Lombard, Geneva, DeKalb, Rochelle, Dixon, Sterling, Morrison, Fulton, Lyons,



MOTOR ROADS RADIATING FROM CENTER OF DETROIT



THE MAIN TOURING WAYS OF COLUMBUS, OHIO

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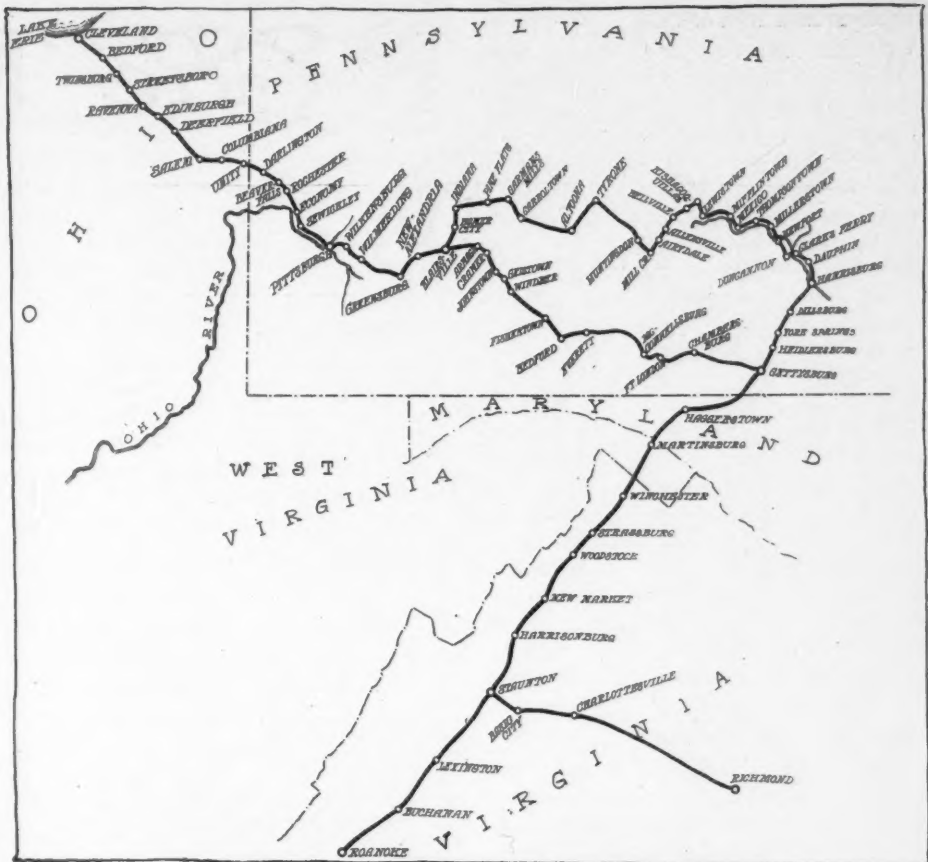


Charlottesville is Monticello, the home of Thomas Jefferson. The Richmond Automobile Club has signboarded the entire Staunton-Richmond route, the signs being approximately 2 miles apart. By the aid of these signs, which warn the motorist against dangerous ascents, sharp turns, etc., the trip can be made with pleasure. According to the information compiled by the Richmond club, one of the best stretches in the state is over the Rockfish Gap, and the grade is such that the entire climb may be made on high gear.

The Gettysburg-Cleveland trip can be made by several different routes. According to the Blue Book the preferred one is via Harrisburg, Altoona and Pittsburg. This route as far as Pittsburg, although being considerably longer than some of the others, has better roads and just as beautiful scenery. Leaving Gettysburg, traveling over 38 miles of fair and poor stretches, you will pass through Heidlersburg, York Springs, Dillsburg, Shepards-town, Harrisburg. Leaving Harrisburg for Altoona, a distance of approximately 138 miles, the route lies through Dauphin, Clark's Ferry, where the Susquehanna river is crossed, Newport, Mifflintown, Lewistown, Reedsville, Belleville, Allensville, Huntingdon, Alexandria, Tyrone, Altoona. Going through the Lewistown Narrows on this stretch of the trip, rough, narrow and stony roads will be encountered. Toll for this amounts to 58 cents.

Passing on from Altoona towards Pittsburg, covering a distance of about 120 miles over the mountains, and over all kinds of roads, the towns en route are: Altoona, Carrolltown, Barnesboro, Garman's Mills, Pine Flats, Indiana, Homer City, Gracetown, Blairsville, Greensburg, Adamsburg, McKeesport, Wilkesburg, Pittsburg.

From Pittsburg to Cleveland, while you have the choice of three routes, the one via Beaver Falls, Salem and Ravenna, with a mileage of 129, is considered the best,



FROM VIRGINIA TO CLEVELAND THROUGH PENNSYLVANIA

and is as follows: Pittsburg, Sewickley, Economy, Rochester; thence on through New Brighton, Beaver Falls, Darlington, Unity, Columbiana, Salem, Deerfield, Ravenna, Twinsburg, Bedford, Cleveland.

A shorter route from Gettysburg to Pittsburg, as outlined by the Blue Book, is through McKnightstown, Cashton, Chambersburg, Fort Loudon, McConnellsburg, Breezewood, Everett, Bedford. Toll for this portion of the trip is \$1.30 for a runabout. Leaving Bedford, pass through Pleasantville, Felix, Geistown, Johnstown, Cramer, Armagh, Blairsville, New Alex-

andria, Greensburg, Adamsburg, McKeesport, Wilmerding Station, Wilkesburg, Pittsburg. This route will be found very rough, but there is magnificent mountain scenery the greater portion of the way. The mileage is considerably shorter, being 197 miles as against 396 by way of Harrisburg and Altoona. Mileage, however, on a long trip should not always be considered, as many times a longer route is preferable, for better time can be made. Detailed information as to the mileages between intermediate points and other route directions can be found in the Automobile Blue Book.

### PREPARING FOR A TOUR—THE PRELIMINARY INSPECTION OF THE CAR

**COLUMBUS, O.**—Editor *Motor Age*—It is quite often the case that the beginner's first extended tour is accompanied by many delays and inconveniences that would not have occurred had the car been gone over and generally tightened up before the start. Usually after the motorist has driven his first car for a few months—just long enough for the different parts to become loosened up a little bit—he feels that he is sufficiently master of the machine to undertake a trip through the country.

Now is the time when the most thorough inspection of the car should take place. The strains on the mechanism and the work demanded of the motor are greater when long drives are made over the usual country roads. Very often the motor is working well and running with all the regularity that could be desired, but is not delivering its full power. On tour, conditions may arise such as bad roads or steep hills which will require the full effort of the motor. Troubles with the power plant usually make themselves known by either noise, overheating or excessive loss of power. The compression of the cylinders should be tested preferably by means of a gauge in the cylinder heads. The valves should be ground, cleaned of carbon, and the condition of the valve springs inspected. If there is much carbon deposit in the motor this should be removed. See that the connecting rods are not too loose and the bearings have not become worn, although this is usually announced by a knock.

Drain out all the old oil, flush out the crankcase with kerosene and refill with clean oil. Look over the joints in the gasoline line and in the intake manifold for leaks, and clean the carbureter. Inspect the cooling system for leakage and any hose that is becoming worn should be replaced. Fill up the cooling system with a solution of soda, let it stand over night and then flush it out with clean water to remove any incrustation. Be sure that the magneto is working well and go over the wiring for worn places in the insulation and for loose connections. Clean the spark plugs or put in new ones and see that the spark gaps are right. Clean the contact breaker and distributor and see that the storage battery is charged to its full capacity and to have an extra set of dry cells in good condition. Make sure that the clutch does not slip, and if a cone clutch is used the leather surface should be examined. Give the brakes the most thorough test of all for the lives of the passengers may depend upon their proper working, but be equally careful to see that the brakes are not drawn up tight enough to drag and use up power. Go over the springs for wear, and then inspect the steering gear. If there is not too much play and the elements of the gear do not seem to be worn, it is best to simply put in new lubricant and leave it alone. Go over every bolt to see that it is set up tight, and then put new oil in the reservoir and spend about 45 minutes with the oil can in lubricating every joint or bearing that offers an opportunity. Make sure that the tires are in good condition, that the tubes or valves do not leak and that the casings are not cut or worn.—A. F. H.

**KEEP SPARK ADVANCED**

**WEST NEWTON, PA.**—Editor Motor Age—Through the Reader's Clearing House will Motor Age answer the following question, as almost every person seems to have a different idea? Should one use more spark in climbing a hill on second speed than on level on high, or should one use the same amount of spark at all times and on all speeds?—Subscriber.

The amount of spark advance for best running conditions is always dependent on the speed of revolution of the motor. The spark at all times always should be as far advanced as possible without causing the ignition knock. Where the hill is steep and the motor tends to slow down on the second speed it may commence to knock if the spark is not retarded, because the ignition of the fuel takes place before the piston has reached the end of its stroke. More power and better fuel economy, as well as less heating of the motor, is always obtained with the spark well advanced, but it should be retarded when the motor begins to pound.

**THE A. L. A. M. FORMULA**

**Miami, Okla.**—Editor Motor Age—Will Motor Age through the Readers' Clearing House give me the rule for figuring the horsepower of a gasoline engine?—K. A. Snowhill.

The A. L. A. M. standard horse power formula is:

$$\frac{D^2 N}{2.5} = \text{Horse power.}$$

This means D, the diameter of the cylinder squared or multiplied by itself, times N, the number of cylinders, divided by 2.5.

**TIRE PRESSURE IN VELIE**

**Fonda, N. Y.**—Editor Motor Age—Through the Readers' Clearing House will Motor Age tell me how many pounds pressure is best to keep in the tires of a Velie touring car?—A Subscriber.

A pressure of about 75 pounds should be maintained in the tires of this car.

**KEROSENE AS CARBON REMOVER**

**Bethel Springs, Tenn.**—Editor Motor Age—Through the Readers' Clearing House will Motor Age advise me if it is necessary to take oil out of the crankcase when you put kerosene in the cylinders to remove carbon, and how much should be put in each cylinder?—J. L. Hendrix.

In using kerosene as a carbon-remover, the kerosene is introduced into the cylinders and the motor turned over several times by hand to get the oil thoroughly spread over the surfaces. The motor is then allowed to stand over night. In the morning the motor is started and run for a few minutes, or until the smoke has disappeared from the exhaust.

There is some divergence of opinion as to the proper amount of kerosene to be used. Some people think half a cupful is necessary, while others believe that a tablespoonful is enough. The best way seems to be to use the lesser amount at

# The Readers'

short intervals of, say, a week or two, depending on how much the car is being used. The oil should always be drained out of the crankcase and new oil put in the morning after the kerosene is employed.

**A CORRECTION**

Under the heading "Motor Refuses to Stop," on page 32 of the Readers' Clearing House for June 1 it was made to appear that the cause of the trouble was due to loose connections at 2 or 4 in the magneto or coil in Fig. 7, or that the steel spring leading from point 2 on the mag-

**EDITOR'S NOTE**—In this department Motor Age answers free of charge questions regarding motor problems, and invites the discussion of pertinent subjects. Correspondence is solicited from subscribers and others. All communications must be properly signed, and should the writer not wish his name to appear, he may use any nom de plume desired.

when starting. You are referred to the answer to S. F. M. in the Readers' Clearing House, Motor Age, issue for May 25, 1911.

**CHECKING MAGNETO WIRING**

**Rhineland, Wis.**—Editor Motor Age—Kindly publish in the Readers' Clearing House columns an illustration of a Bosch magneto, model 9, 1910, for a six-cylinder Kisselkar, and explain how to check over the wiring on same. I am putting in a new idler gearshaft and bearing in the timing gear case.—Hy Tension.

In Fig. 1 is shown the rear end of a Bosch magneto for a six-cylinder motor with the covers of the distributor and breaker-box removed for inspection. Both covers are taken off by loosening the screw S, and then turning the three-armed yoke, which holds the covers in place, about  $\frac{1}{4}$  inch in an anti-clockwise direction, so that its arms cleared the screws S, S1 and S2. It never should be necessary to loosen the screws S1 and S2 to remove the covers. The cover to the breaker-box B is secured by a blade contact spring, and can be removed independently of the distributor cover, by drawing the lower end of the blade about  $\frac{1}{8}$  inch away from the cover and then swinging it to one side. Both the distributor and the contact-breaker should be exposed when checking of the magneto timing is desired.

In checking the timing, first get No. 1 cylinder on its firing center. The firing center is the top center of the piston just as it is ready to descend on the firing stroke. The firing center of No. 1 cylinder may be found by opening all the priming cocks but the one in cylinder No. 1, and then cranking the motor until the compression of that cylinder is encountered. This indicates that the piston in No. 1 cylinder is rising on its compression stroke; and that when it reaches the top of the cylinder it will be on its firing center.

To ascertain when the piston has reached the top, open the petcock, place a hatpin or the like down through it till it rests on the head of the piston, then by turning the crank slowly raise the piston in the cylinder to the top end of the stroke and allow it to descend about  $\frac{1}{4}$  inch on the explosion stroke; then stop. The magneto should now be set so that the revolving segment G of the distributor occupies the position shown in Fig. 1, and it should

**NOTICE**

Motor Age has received communications addressed to the Readers' Clearing House from the following named towns and nom de plumes:

Lawrence, Kan.—A Subscriber.  
Chicago—Subscriber.  
Washington, Ia.—A Subscriber.  
Shreveport, La.—Reader.  
Lawrence, Kan.—R. D. M.  
McLean, Ill.—A Subscriber.

These communications will be held until the proper signatures have been received. All communications written over a nom de plume must bear the writer's signature, otherwise such communications will not be answered. These signatures are wanted as proof of the authenticity of the inquiries.—Editor Motor Age.

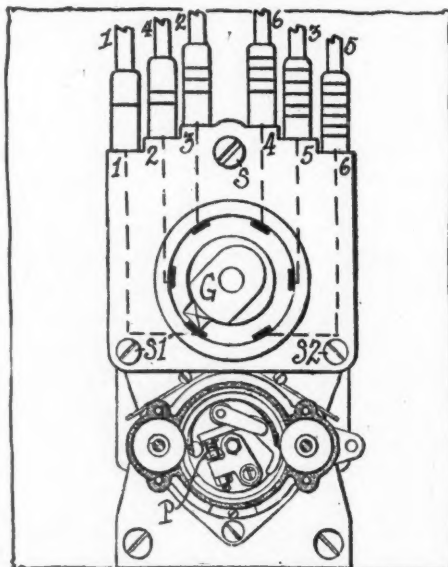


FIG. 1—CHECKING MAGNETO TIMING

neto does not make proper contact with the center screw. This is not quite correct, owing to a typographical error. The words "or 4" should have been omitted.

**ETHER FOR STARTING**

**Fergus Falls, Minn.**—Editor Motor Age—Can I use ether to give more power to my motor? How can I mix it with gasoline, and in what proportion can I use it?—J. W. R.

Yes. Use 1 pint of gasoline and  $\frac{1}{2}$  ounce of chemically pure ether. Pour about a teaspoonful into each priming cup



# Clearing House

**EDITOR'S NOTE**—To the Readers of the Clearing House columns: Motor Age insists on having bona fide signatures to all communications published in this department. It has been discovered that the proper signature has not been given on many communications, and Motor Age will not publish such communications, and will take steps to hunt down the offenders of this rule if it is violated.

be possible to separate the platinum points P of the circuit-breaker by manipulating the spark-control lever over the steering wheel.

If you are careful to make the new shaft exactly the same as the old one so that the gear and the magneto coupling will occupy the same relative position upon it, the marks upon the gear and coupling should guide you in properly replacing the magneto without having to check over its timing. As to the magneto wiring, it is but necessary to see that the high-tension cables leading to the spark plugs lead to the proper cylinders. The motor fires 1-4-2-6-3-5, therefore, as indicated in Fig. 1, No. 1 cable should lead to No. 1 cylinder, the front one; No. 2 cable to No. 4 cylinder; No. 3 cable to No. 2 cylinder; No. 4 cable to No. 6 cylinder; No. 5 cable to No. 3 cylinder and No. 6 cable to No. 5 cylinder. The ground wire, of course, should be attached to the terminal at the upper end of the blade spring that holds the cover of the circuit-breaker box in place.

## WANTS POWER TIRE PUMP

Stillwater, Okla.—Editor Motor Age—I would like to have some advice on power pumps. Please let me have the names of the ones that give the best service. I wish to attach one to a car.—H. B. Bullen.

Many of the popular makes of power tire pumps were described and illustrated on pages 43 to 45 inclusive, Motor Age issue for February 2, 1911.

## MAGNETO GIVES HOTTER SPARK

New Orleans, La.—Editor Motor Age—Will Motor Age kindly answer the following questions:

1—Why are the exhaust reports louder though the power be less from a retarded spark—either battery or magneto?

2—Why are the exhaust reports louder and the power still less from battery ignition than magneto ignition, with the same setting of the throttle and spark?—Ignoramus.

1—When the spark is retarded the ignition of the gases in the cylinder of a motor is retarded and combustion of the gases is slower; consequently there is more pressure in the cylinder when the exhaust valve is opened.

2—A magneto generally gives a hotter and quicker spark than a battery system; therefore the ignition and combustion of the gases in the cylinder takes place more quickly; the pressure of the gases on the

piston head is greatest while the piston is traveling through the central zone of the stroke, hence more power, and as a result combustion is more complete before the exhaust ports are opened, so that the gases have cooled and the pressure at the time of exhaust opening is not so great.

## ACETYLENE GAS QUESTIONS

Lenora, Ia.—Editor Motor Age—Will Motor Age answer the following questions through the Clearing House department?

1—Where can I purchase a burner for an autogenous welding outfit?

2—Is the acetylene gas compressed in the tank or is it used just as it comes from the generator?—S. A. Black.

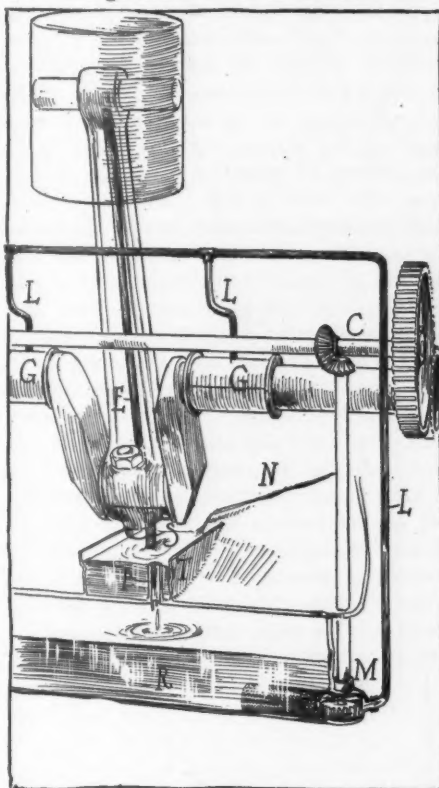


FIG. 2—CIRCULATING OILING SYSTEM

1—The Autogenous Welding Equipment Co., Springfield, Mass.

2—The acetylene gas is compressed in tanks for portable uses, but generators are provided if desired whereby the gas can be generated at about one-half the cost, and ready for use direct from the generator.

## ALL KINDS OF QUESTIONS

Chicago—Editor Motor Age—Through the Readers' Clearing House kindly answer the following questions:

1—Should nuts about the engine be tightened when it is hot? If so, why?

2—Are pocket voltmeters accurate?

3—Explain circulating, non-circulating, gravity and force-feed oiling systems. Which is regarded as the best? Are there any others?

4—What sort of test can be made to ascertain if water is circulating properly throughout the system?

5—How can it be determined if a valve stem is too short and the valve not opening at the proper time? What is the proper adjustment?

6—I understand the condenser on a trembler coil is connected up by wire on each side of the trembler or breaker, but not so in the case of the magneto—Bosch, for instance. Explain how the electricity reaches the condenser in magneto.

7—On the Eisemann magneto where a stud or wiper is used on the gear wheel driving the high-tension distributor and which completes the primary circuit from the trembler coil, are not the segments which come in contact with this stud or wiper insulated from the segments which make contact with the high tension distributor, both sets of segments being on the same disk or fiber? If not, explain in detail the flow of the current.

8—Explain with a diagram the magneto using a rotating field. Is it wired, primary and secondary, within itself and to the plugs the same as a magneto with revolving armature? I understand it is necessary that the armature wrapped with copper wire must revolve in order to cut the lines of force. Has this style of magneto any advantage over that using revolving armature? How many times does the rotating field cut the lines of force in one revolution?

9—Do all magnetos only generate the alternating current? Could a direct current be secured? If so, what changes, etc., in the construction of magneto and wiring of armature would be necessary?

10—How much piston lead should there be on the average engine when using a battery, coil and commutator; when using low-tension make-and-break; when using high-tension magneto? By lead, I mean correct position of the piston—ahead of top dead center—when spark lever is fully advanced. How is this lead determined?—E. S. V.

1—Nuts about the engine should be tightened while the engine is cold. Not only is it inconvenient to tighten nuts on the engine while it is hot, but the expanded condition of the metals renders it difficult to tighten the nuts sufficiently without subjecting both the nuts and studs to considerable more strain than would be necessary if the motor were cold.

2—Pocket voltmeters generally are not absolutely accurate, but sufficiently accurate for the purpose of testing the condition of storage batteries.

3—A circulating oiling system is one in which the oil which is fed to the bearings is used over and over again; means being provided to collect all superfluous oil and return it to a reservoir from which a pump or some other means is employed to again force it directly through the bearings, or to another reservoir from which it flows by gravity or splash to the bearings.

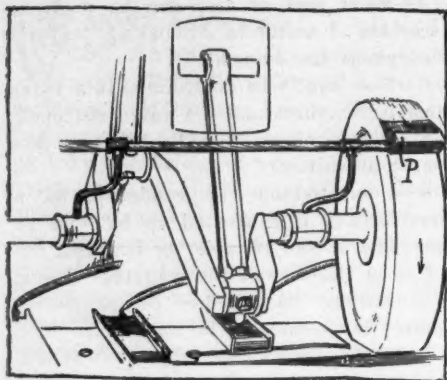


FIG. 3—ANOTHER CIRCULATING SYSTEM

The operation of a typical circulating oiling system is shown in Fig. 2; the main oil supply is contained in the reservoir R, from which it is drawn by the pump M and forced through pipes or leads L to the main crankshaft bearings G. The overflow from these bearings is thrown by centrifugal force against the walls of the crankcase and cylinders and, as it runs down, is collected by inclined channels N which conduct it to troughs T. For lubrication of the connecting-rod bearings, scoops S are fitted to the lower ends of the connecting-rods, which dip into the oil contained in the troughs and scoop it up into the crankpin bearings at the lower ends, and through tubes E running up the rods to the piston-pin bearings. Overflow pipes P are provided in the troughs T so that the excess oil can return to the reservoir R. The pump M is operated by bevel gears and vertical shaft from the camshaft C.

Another type of circulating oiling system is shown in Fig. 3; in this system the flywheel housing forms the oil reservoir and as the lower portion of the flywheel is submerged in oil, a film of it adheres to the rim of the flywheel as it revolves. A scoop P collects oil from the rim of the wheel and this oil flows by gravity to the engine bearings, and to the troughs under the rods. Of course, there are several other designs of circulating systems, but these should serve to show the principles involved.

A non-circulating oiling system is one in which the oil which is supplied to the engine is not recirculated; but is supposed to be fed at the rate of consumption.

A gravity oiling system is one in which gravity is the sole means of supplying oil to the motor. Fig. 4 shows the features of the E-M-F gravity oiling system, in which the bearings of the motor are lubricated by splash, and the reservoir is simply so arranged that the desired splash level be maintained in the splash compartments. In this illustration, the lower portion of the engine case is cut away to show the oil-level in the splash compartments C. Two large leads L communicate between the reservoir R and the splash compartments, which enter the side of the engine case just below the level at which the oil is to be maintained. The reservoir R is air-tight and oil cannot flow into the splash

compartments of the case until the oil level therein drops below the opening of the leads and admits air through them into the reservoir. The vacuum maintained in the reservoir prevents the oil from draining therefrom, and as this vacuum regulates the flow of the oil the system often is called a vacuum system.

The Hupmobile has what might be termed a strictly gravity oiling system. This system is illustrated in Fig. 5. On the side of the cylinders is a cast-iron tank R of 3 pints capacity. From this tank the oil flows through two pipes M to the two compartments of the crank-case. The flow of the oil is manually regulated by means of a lever L which has a ball-and-socket connection with the throttle control lever under the steering wheel. This lever connects indirectly with the two plungers which regulate the oil flow through the pipes M. The detail of each plunger is shown in Fig. 5 and comprises the plunger or valve F with its tapered end resting on the seat E in the base of the oil tank. The upper end carries a roller B, and surrounding the plunger stem is a spring, I. The method of operation is briefly as follows: The lever L, Fig. 5, connects with a shaft arranged along the top of the tank, which shaft carries two cams K. As the throttle is opened for the purpose of obtaining more power or speed from the motor, the shaft is automatically moved forward and the cams raise the plungers F, thus permitting more oil to flow. When the throttle is closed, the plungers rest upon their seats and the oil is shut off entirely. In the Hupmobile system the top of each plunger carries adjusting nuts A; and at the base is a glass sight feed G connecting with the oil delivery tube H. Within the crankcase compartments of the motor a splash level is maintained with a drain cock in each compartment.

A force-feed oiling system is any system in which the oil is fed to the bearings of a motor by mechanical force. Many circulating systems are force feed systems. By many, all systems having mechanical force-feed oilers are considered force-feed systems.

It is difficult to state which is the best oiling system, for much depends upon design and construction of the system, the adaptability of the system to the motor, and the care with which the operation of the motor and oiling system is attended. The circulating oiling systems are most popular at the present time; perhaps, not because they are the best, but because they give the best service under the conditions under which motor cars generally are forced to operate.

All oiling systems are either circulating or non-circulating; and all systems are either gravity or vacuum, pressure or force-feed, or a combination of these.

4—To test the water circulation of a motor, first disconnect that connection leading to the radiator, arrange a receptacle to catch any water that may flow from it, then start the motor and keep filling the radiator as required. If a full steady stream flows from the disconnected end of hose, it is a good indication that the pump is working and that the water is circulating properly. It is possible, however, that one of the waterjackets or one of the branch connections could be wholly or partially clogged without greatly impeding the flow from the connection to the radiator, so the only positive test is one in which each connection and jacket is tested separately.

If there should be a decided weakness in the flow of water from the disconnected radiator connection, first stop the motor and disconnect the lower radiator connection and see if the water flows freely from the radiator as it is poured in at the top.

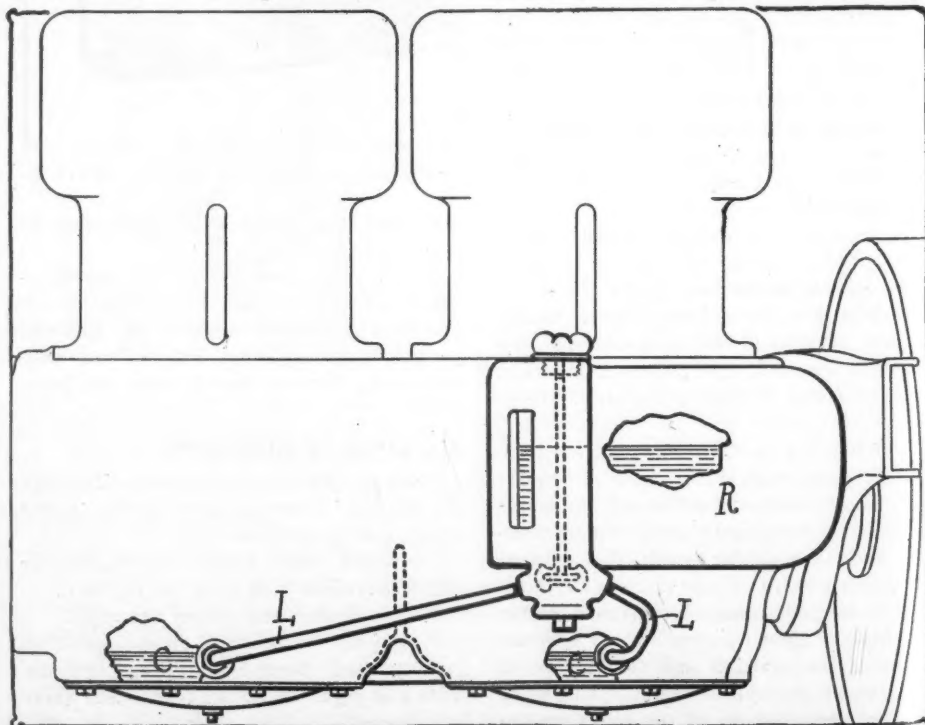


FIG. 4—SHOWING FEATURES OF E-M-F GRAVITY OR VACUUM OILING SYSTEM



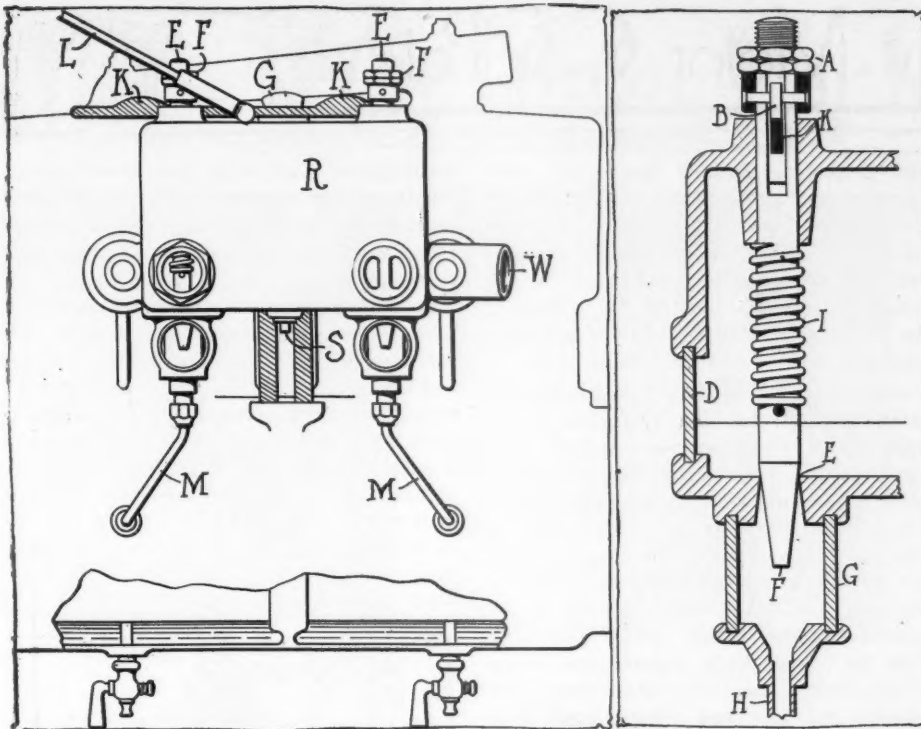


FIG. 5—FEATURES AND DETAILS OF HUPMOBILE GRAVITY OILING SYSTEM

If the radiator is clear, connect up the outlet hose again, fill the radiator with cool water, start the motor and while the water is flowing through the system, feel of the pipes and waterjackets and see if all are equally cool; parts in which the circulation is poor would most probably be warmer than other parts of the system.

5—When a valve stem is too short, it will make a clicking or tapping noise when the motor is in operation. To find a noisy valve, slip a folded business card between each valve stem and lifter, one after another, while the motor is running. As soon as the card is slipped under the noisy valve the noise will cease. The motor then should be stopped and the space between the valve stem and push rod or tappet adjusted to one thickness of the card, or even less, if possible without causing a loss of compression when the motor is thoroughly warm and the valve stem elongated from expansion. About 1-64 inch is the space generally allowed.

6—The condenser of a trembler coil is connected up by wire on each side of the trembler; the condenser of the Bosch magneto is connected in practically the same manner, as an examination of the diagram shown in Fig. 6 will disclose; there is, however, no wire connection between one terminal of the circuit-breaker and the condenser, as the central supporting screw of the circuit-breaker fits into a threaded socket that forms one side of the condenser. This connection is indicated by a heavy dark line in the diagram, which runs from a point on the frame of the condenser to another point on the contact-breaker disk.

A current of electricity has momentum, just the same as a column of moving water or any moving object. When a cur-

rent of electricity flows through the contact points of the magneto, and the contact points are suddenly wrenched apart, if the condenser were not inserted the current would tend to follow across the separating points until the gap became too wide. This following across of the current would cause an arc that is very hot and which would soon cause excessive burning and pitting of the platinum contacts. With the condenser shunted across the contact points, as soon as the points are separated, the resistance of the gap becomes greater than the path through the condenser, so that instead of following across the points and expending its energy in heat, the current flows into the condenser where it is stored like compressed air, so to speak, until the circuit-breaker points again are in contact, whence it again joins the flow of current through the primary circuit adding to its momentum.

7—The segments of the primary distributor are thoroughly insulated from those of the secondary.

8—Motor Age has no data on a magneto with a revolving field. If you have reference to the Mea, or the rocking type of Eisemann, the wiring is practically the same and the armature windings cut the lines of force in identically the same manner as in the ordinary types. With the rocking type of magneto, the break of the primary circuit always occurs when the armature is at the most favorable point for generating current, so that the same intensity of spark is obtained at retard as at advance. Each loop of wire on the armature cuts the lines of force twice in a revolution.

9—All magnetos not provided with a commutator are alternating current generators. When fitted with a commutator they become direct current generators. No changes in the wiring of the armature would be required. A direct current generator could be quite readily made to deliver an alternating current by disconnecting the commutator, but an alternating current magneto could not be as easily arranged for direct current because no provisions are made for the attachment of a commutator. There are no magnetos of the direct current type in use on motor cars.

10—A safe lead for any type of ignition system is about  $\frac{1}{4}$  inch of downward piston travel at the beginning of the explosion stroke with the spark-control lever fully retarded. That is, the adjustment should be made so that with the spark-control lever fully retarded, the spark will occur when the piston has descended about  $\frac{1}{4}$  inch on the explosion stroke. If the range of spark advance is unusually limited, the adjustment can be made so that the spark occurs just as the piston starts to descend; lost motion in the spark-control mechanisms, however, might make so close a setting dangerous. The danger would be due to the likelihood of accidentally having the spark too far advanced, which might cause a back kick.

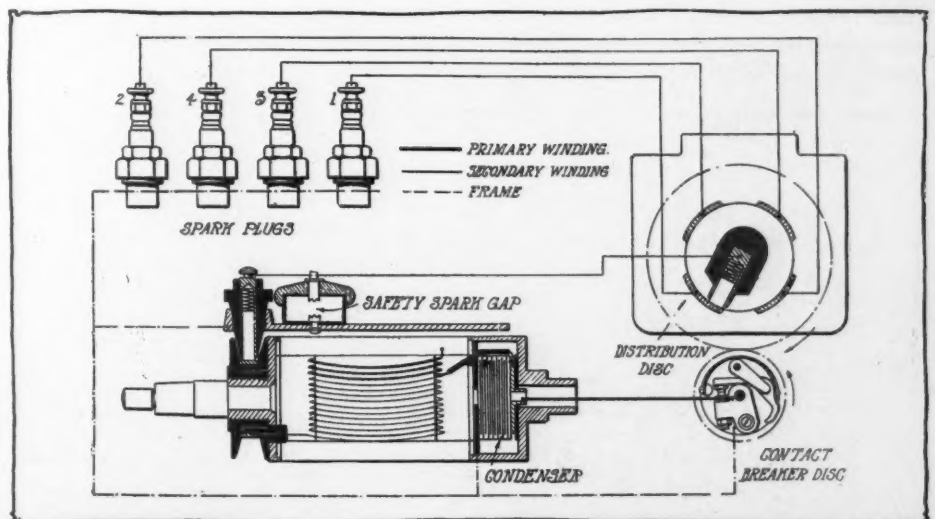
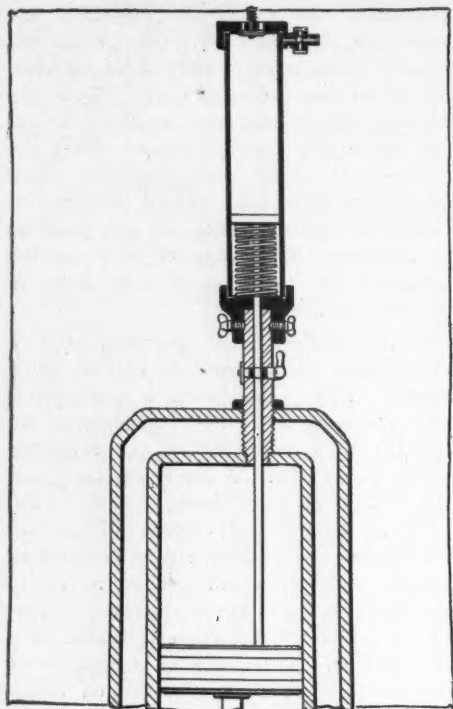


FIG. 6—WIRING DIAGRAM SHOWING FEATURES OF BOSCH IGNITION SYSTEM

# Current Motor Car Patents



FOLLETT'S AIR COMPRESSOR

**FOLLETT'S Air-Compressor**—No. 993,356, dated May 30; to Frank E. Follett, Otterbein, Ind.—This patent applies to an air-compressor which is adapted for temporary attachment to the cylinder head of an internal combustion motor for the purpose of furnishing compressed air. It is particularly adapted to the motor car for the purpose of inflating tires. As illustrated, it is a combination of an engine cylinder, a hollow stud threaded through the wall thereof, a pump cylinder, a base secured to the cylinder and having a socket adapted to fit over the end of the stud, set-screws carried by the base for attaching the cylinder to the stud, air inlet and outlet valves connected with the pump cylinder, a plunger mounted to reciprocate within the cylinder, and an elongated plunger rod attached to the plunger

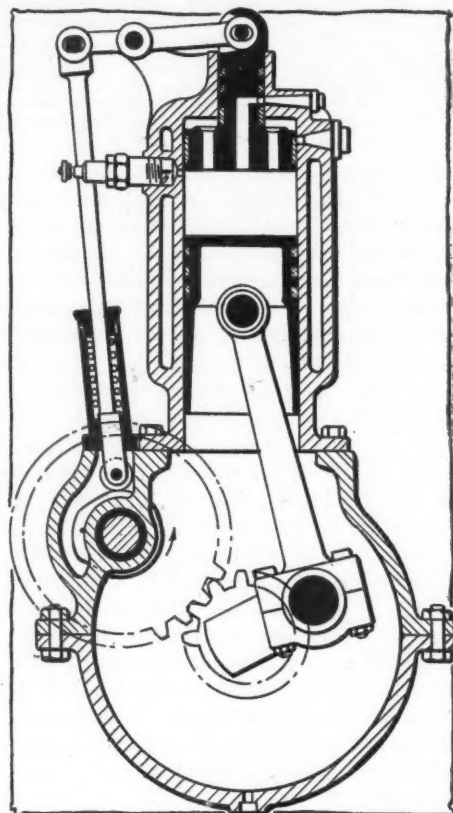
and projecting through the hollow stud into the path of the piston disposed within the engine cylinder whereby outward movement of the engine piston will impart a corresponding movement to the pump plunger, and means for returning the pump plunger to normal position upon return movement of the engine piston.

**Lister Shock-Absorbing Device**—993,849, dated May 30; to John T. Lister, Cleveland, Ohio—This patent pertains to a pneumatic device for resiliently supporting a vehicle body upon an axle. It comprises a hollow tubular reservoir, a vertically extending piston at one end of the reservoir, and a horizontally extending piston in the opposite end of the reservoir; the vertically extending piston being connected with the vehicle body, causing the piston to move when there is relative movement between the axle and vehicle body in a vertical direction, and the horizontal piston being operatively connected with the vehicle body, to cause the piston to operate when there is relative movement between the axle and the vehicle body in a horizontal plane.

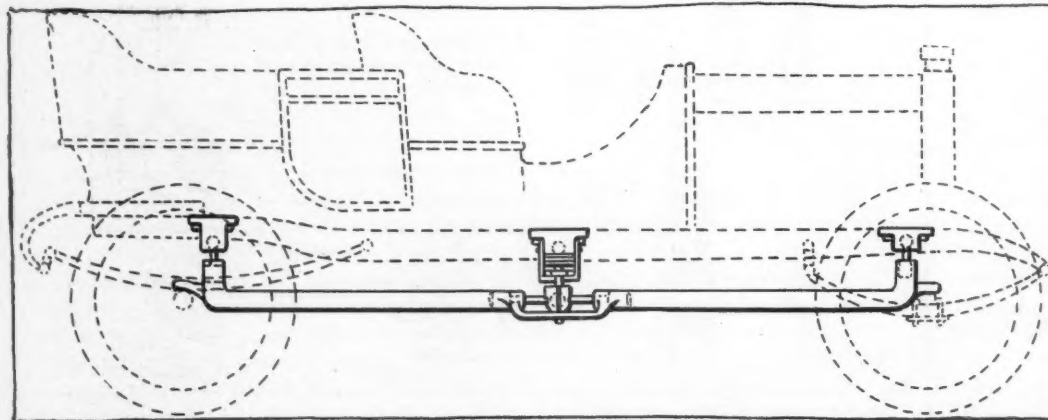
**Appel Suction Priming-Cup**—No. 993,943, dated May 30; to Orville Emanuel Appel, Bushton, Kans.—This patent applies to a means, shown in an accompanying illustration, for priming explosion or hydrocarbon engines. It comprises a cup or reservoir of a capacity to contain only sufficient fuel to supply the engine until the regular charges from the carburetor can reach the explosion chamber. The cup is provided with an unobstructed pipe, leading from a point near the bottom of the cup to a point above the level of liquid in the cup when the latter is filled to the normal height. This pipe is of a length to enter the intake conduit of the engine in close proximity to the explosion chamber of the engine.

**Richards-Bellingham Valve Mechanism**—No. 993,875, dated May 30; to John Hartland Richards, Tamworth, and Benjamin

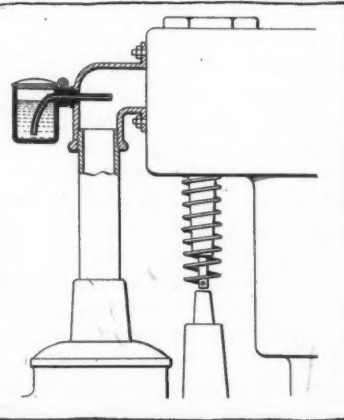
Bellingham, Smethwick, near Birmingham, England—This patent relates to a valve mechanism for four-cycle internal combustion engines. As illustrated herewith, it comprises a piston working within the outer end of the main engine cylinder, and adapted to co-operate with ports in the cylinder for the purpose of controlling the exhaust gases, the piston having a central stem which works within the cylinder head, and which is provided with a port communicating with the interior of the cylinder and adapted to co-operate with an inlet port in the cylinder head so as to control the admission of the working fluid. The accompanying illustration shows the vital features of this patent.



RICHARDS-BELLINGHAM MECHANISM



LISTER SHOCK-ABSORBING DEVICE



APPEL PRIMING CUP



# The Motor Car Repair Shop

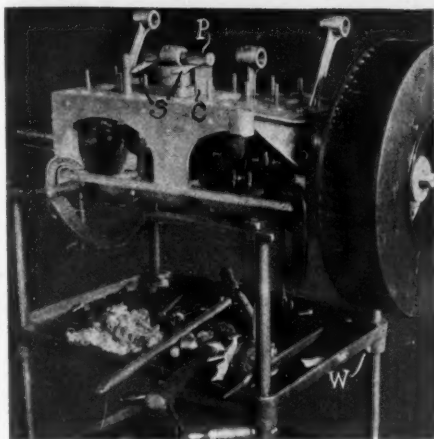


FIG. 1—LINING UP CONNECTING-RODS

## Lining Up Rods and Pistons

THERE are many young men making repairs on motor cars who do not know that great care is necessary in assembling a motor after a connecting-rod, piston or cylinder has been refitted, or the bearings readjusted; and a few hints may be obtained from the illustrations shown herewith, which illustrations were obtained in the motor assembling department of the Franklin company.

Fig. 1 shows how the alignment of the connecting-rod is tested before the piston is attached to it. The devices employed are a jig or gauge C which resembles the lower portion of a cylinder, cut off just a few inches above the base, and with its upper edge faced off to form a true surface parallel with the base; and an arbor or pin P resembling a long piston pin. The gauge C is fitted into place and secured in the same manner that a cylinder would be and the arbor P, being of the same diameter as a piston pin, then is slipped into the piston-end bearing of the connecting rod and the crankshaft turned till the pin rests upon two slips of paper S arranged between the surfaces of the gauge C and the pin. If on pressing down very lightly upon the connecting rod both sheets of paper are held equally tightly between the protruding ends of the pin and surfaces of the gauge, one is assured that piston-pin bearing is in line with the crankshaft bearing. If, however, one of the pieces of paper should be held tightly and the other loosely the rod will have to be bent slightly till the proper alignment is obtained. The connecting-rod then is ready for the attachment of the piston.

When the piston has been attached another gauge, Fig. 2, is employed to adjust it so as to eliminate the possibility of misalignment when the cylinder is in place. This is an important point; the piston should be in absolute alignment with the cylinder walls in order to run with the

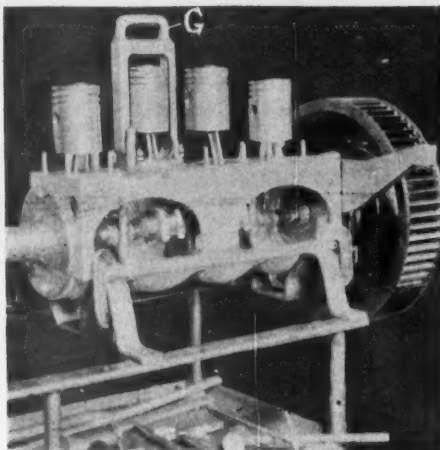


FIG. 2—LINING UP PISTONS

greatest ease and least wear. It is, however, a point that often is entirely overlooked. The repairman reassembles a motor and finds that it does not turn over as freely as it should; the cause is attributed to tight bearings, or lack of lubrication and the trouble overlooked. The result is that there is an uneven bearing of the piston in the cylinder, of the piston pin in its bearing and, perhaps, of the rod on the crankpin bearing; and excessive and uneven wear takes place at each point.

Every repair man can and should make sure that the pistons are properly fitted into the cylinders and onto the rods before permitting them to leave the shop. A test can be made in the following manner: When a cylinder has been assembled into place and secured, one has but to take hold of the connecting-rod and see that it can be moved sidewise easily. Of course, if the bearings have just been scraped in and are tight, this will be impossible until the motor has been run for a while and the bearings loosened up a trifle. Where

gauges such as is shown in Fig. 2 are not provided, the vertical alignment of the piston is tested with a try-square whose base is rested on a smooth faced surface of the crankcase and the vertical edge rested against the side of the piston as near the sides as convenient; it is good practice to test both sides opposite the ends of the piston pin if possible.

Before leaving the illustration shown in Fig. 1, attention is called to the simple and practicable design of motor stand. The uprights are comprised of four pieces of piping screwed into flanges at the bottom and having cast iron shelves adjustably attached to them below the frame which supports the motor. The corners of the shelves are reinforced and bored out so as to have a sliding fit on the uprights, and a little set-screw W is provided at each corner to secure the shelf at the desired height. These shelves not only provide an excellent place for tools and motor parts, but also render the stands very rigid and substantial.

## Neat Stock Room

In Fig. 3 is shown a section of one of the neatest little stock departments to be found in any small repair shop in the country. It is the spare-parts department of a repair shop in Cambridge, Mass., and the arrangement is worthy of note to any who are desirous of making the most of a limited amount of stockroom space. In this stockroom, notwithstanding the fact that an unusually large stock of spare parts is constantly kept on hand, system and order prevail, with a place for everything, and everything in its place. At the right is seen the shelves for the smaller parts and it will be noted that the shelves are divided into pigeonholes of two different sizes. Each compartment is plainly labeled with the name of its contents.

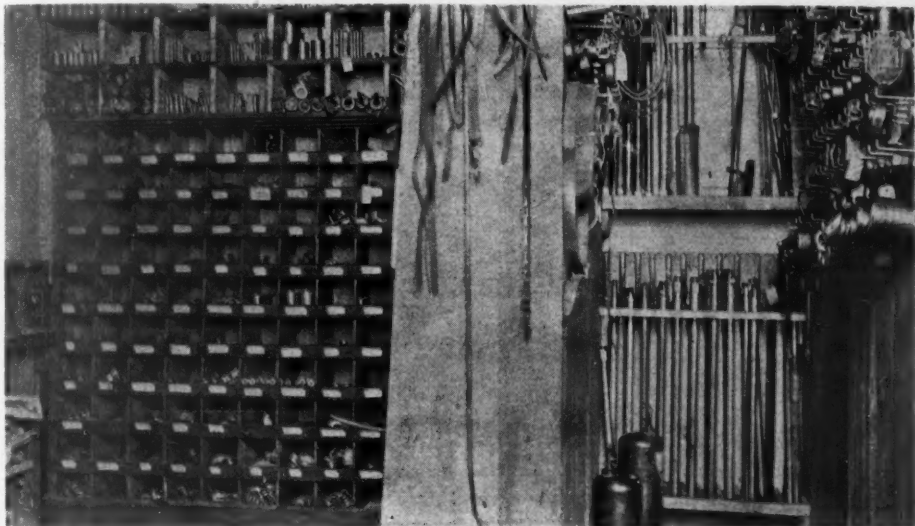


FIG. 3—SHOWING HOW NEAT AND ORDERLY A REPAIR SHOP STOCKROOM CAN BE



# From the Four Winds

**McMILLAN a National Driver**—It is likely Eaton McMillan of Denver will be added to the National team. McMillan won the 200-mile race at Denver Memorial day.

**Change in Louisville Officials**—H. L. Ramsey has been appointed assistant secretary of the Louisville Automobile Club, to succeed W. H. Argabrite, who resigned several weeks ago to become advertising manager for a big manufacturing concern.

**Another Run Postponed**—The Quaker City Motor Club's run for electric pleasure cars originally scheduled to take place June 10 has been set forward a week, in order to give a greater number of electric owners an opportunity to enter. So far but nine entries have been received. The route mapped out will take entrants through Philadelphia and suburbs to Three Tuns, Pa., and return, on excellent roads and through the most picturesque sections of the surrounding country.

**Signboarding Completed**—Frank M. Fretwell, secretary of the Pacific Highway Association, has completed marking the highway from Tacoma to Portland, and thus far has marked 346 miles of highway with posts and signs. A week's vacation will be given the highway markers in Portland and their trucks will be given a place of honor in the decorated parade to be held in connection with the annual rose festival. A good deal of comment has been raised as to the fact that Pacific highway signs do not carry any mileage. This matter was thoroughly gone over before any of the signs were posted, and it was decided that no discrimination be made in favor of any city by giving it publicity and leaving out other towns. In this way every city along the Pacific highway will be equally interested in maintaining these guides in first class condition.

**Touring Club Branches**—For the benefit of motorists touring through New England this coming season, four important branches have just been established in the leading cities by the Touring Club of America, which will be the headquarters in their respective localities for the latest and most reliable road information. These branches will be opened June 15. The new branches with their locations are: The Naugatuck valley branch in the Hotel Elton at Waterbury; Connecticut valley branch in the Hotel Kimball at Springfield; the White mountains branch in the Mount Washington House, Bretton Woods, N. H., and the Berkshire hills branch at the Hotel Wendell, Pittsfield, Mass. Official cars will be connected with each of these branches and the latest information regarding road conditions, including any necessary detours owing to repairs or washouts during the summer, as well as the ex-

istence of speed traps, will be prominently posted on a large bulletin board in each branch. In addition the managers will furnish visiting motorists with route lists and other suggestions for tours in the locality.

**Breaks Record**—At the aviation meet in Davenport, Ia., June 9-11 Pete Petersen in a 50-horsepower Pope-Hartford clipped 2 seconds off Barney Oldfield's local record for 1 mile in making the circuit of the mile track in 1:00. Oldfield set the track record at 1:02 in 1909.

**Ohio's Big Collection**—The Ohio state motor car department has turned into the state treasury the sum of \$103,514.35, which represents the amount collected in license fees for owners, manufacturers, dealers and chauffeurs since the first of the present year. At the present rate of applications 200 sets of tags are being used daily.

**Des Moines Ready for Run**—Des Moines' second annual little Glidden reliability run will leave June 19 for a 3 days' run through eastern and northern Iowa by way of Davenport, Dubuque and the northern Iowa lakes. Fifty cars have been entered for the run. The event will be under A. A. rules, having been sanctioned by that body. Earl Butler, of Des Moines, will be referee.

**Kenosha Will Try Racing**—On Sunday, June 18, following the 2-day race meet at the state fair park, Milwaukee, Wis., the new motordrome at Kenosha, Wis., will be formally opened. While motor cycle races were held on the reconstructed track on June 3, the June 18 meeting will be the first for motor cars. The feature events will be exhibitions by Burman and Strang, both drivers going to Kenosha direct from Milwaukee. A good program of events is being prepared.

**Marking Pacific Highway**—It is generally conceded on all sides that the marking of the Pacific highway across the state of Washington by the Automobile Club of Seattle has done more to stimulate interest in the international road project that is being furthered by the Pacific Highway Association, than any other one move the good roads boosters have made since the organization of the association last fall. The last half of the work of marking the north and south trunk line coast road was completed during the past week by representatives of the Seattle club, the part north of Seattle having been done about a month ago. The local authorities of British Columbia have agreed to take up the work and continue it through from Blaine, on the international boundary line, to Vancouver. When this is finished, the Pacific highway will be completely marked from Vancouver, B. C., to the Columbia river. It is expected by the highway association

officials that the work of marking the road through the state of Oregon will be taken up by the Portland Automobile Club or the Oregon State Automobile Association.

**Glide in Russian Test**—Advices received by the Bartholomew Co. tell of the competition of a Glide in the Russian reliability run from Moscow to Oral. Twenty started, seventeen reached Oral and eight had perfect scores. The Glide was penalized 1 point for a broken carburetor valve. In the speed trials at Oral the Glide was second.

**Connecticut's Women Drivers**—That there are nearly 1,000 licensed women drivers in Connecticut is brought out by an examination of the licenses in the motor car department of the secretary of state's office. Connecticut is one of the states which requires all drivers to be licensed, whether owners or not. The wives and daughters of many owners at once secured licenses to drive, and doubtless most of those who have secured the cards are drivers.

**Prominent German Motorist Killed**—In a collision between an electric street car and a motor car, near Frankfurt-a-Main, Germany, three prominent German motorists were killed recently. One of them, Karl Neumaier, was well known in the United States as manager of the Benz team which took part in the Savannah race meet. Neumaier was a director of the old Mannheim concern and one of the veterans in the sport in Germany, being a contestant in most all the important road contests promoted in Germany in recent years. As a technical man he was regarded as one of the foremost in the industry. He was only 37 years old.

**Going At It Right**—Public-spirited citizens of Milwaukee, Wis., including leading motorists, have organized the Oconomowoc-Milwaukee Road Association to improve and maintain the main traveled highway between Milwaukee and Oconomowoc, the heart of the pretty Waukesha county lake region. A fund of \$1,000 is being raised by subscription, it being estimated that only this much will be needed to grade the road, give it a crown and keep it in condition by judicious use of the split-log drag after every rain during the touring season. Louis J. Petit, president of the Wisconsin National Bank, is chairman; William H. J. Kieckhefer, a large manufacturer, is vice-chairman; Emil Schandelin, capitalist, is secretary and Guido J. Hansen is treasurer. As proof of the economy of the method used by the association, there has been reconstructed a stretch of road between Pewaukee and Hartland, probably the worst along the route, at a cost of \$30 per mile. In appealing for subscriptions of from \$2 to \$50, the



association asks motorists to send a check for about one-half the amount of the actual estimated damage done to their cars every time they drive over this road. It is hoped to raise the fund and complete the work by July 4. The entire road is known as the Blue Mound, and it is the main exit to the westward from Milwaukee.

**Home for Columbus Club**—Arrangements are being made by the Columbus Automobile Club to take possession of the new club rooms in the Virginia hotel, Columbus, O., July 1. A committee has been named to secure new furniture and the rooms, which will be much more commodious than the present quarters, will be fitted up in luxuriant fashion.

**Taft Will View Parade**—One of the big features of the celebration of July 4 at Boston by the Roxbury citizens is to be a motor parade for which a lot of prizes will be offered. President Taft, who will be at his summer home in Beverly, has promised to attend. Some of the Boston dealers probably will enter the feature classes of the parade.

**Dayton Club's Outing**—The second annual opening of the Automobile Club of Dayton, of Dayton, O., took place Saturday, June 10, at the beautiful grounds in Hills and Dales, located on the John H. Patterson estate. Visitors from Cincinnati, Columbus, Hamilton, Piqua and other Ohio cities were in attendance. Tennis, croquet and other outdoor sports were enjoyed during the day. At 4 o'clock aeroplane flights were made. In the evening about 250 couples danced in the new pavilion, which was erected by John H. Patterson, president of the National Cash Register Co. A dinner was served between 6 and 8 o'clock in the evening. The club is one of the most progressive in the state. It has a large membership in other cities. The grounds are situated in one of the most beautiful suburbs of the city, and improvements are being made continually.

**Educating the Governor**—Governor Eugene N. Foss, of Massachusetts, learned a whole lot about motor laws, motoring, highways and highway maintenance last Saturday when he made a motor trip from the state house in Boston to the Wachusett mountain reservation near Worcester with former president Lewis R. Speare of the A. A. A. and Chairman Harold Parker of the Massachusetts highway commission. The trip was arranged by Mr. Speare, and he had the governor and Charman Parker as his guests. They left at 3:30 Friday afternoon and motored to the reservation, where they spent the night, returning to Boston the next day. Mr. Speare had been reading the report of Expert Walter Webster advocating that all cars using the Massachusetts park pay a license fee of \$5 or \$10, and so he had a good chance to puncture the arguments of the expert. And as Chairman Parker of the highway commission is an acknowledged expert on good roads and their maintenance the governor

had an opportunity to learn something about them, as he is a great inquisitor. The party returned on Saturday, and while nothing is said by any of them, there is little doubt but what the governor knows more about motoring and highways now than he did before.

**Will Oil All Roads**—Kalamazoo county, Mich., may be the first county in the state to have oil roads, if the present plans carry. A number of farmers living in this vicinity are organizing with the idea of purchasing oil to put on the highway. They believe it will be a great benefit.

**Wipes Out Danger Point**—The Massachusetts highway commission gave a hearing a few days ago on approving the regulation of the Boston park commission relative to the change on Commonwealth avenue, wiping out the danger point caused by holding motor cars to the left-hand driveways. The question of whether the commission had authority in the matter was brought up, as it controls motor vehicles only, and the change now covers all vehicles. There was no opposition to it, anyway, and so the commission probably will approve the rule as far as motor vehicles are concerned.

**Starts on Long Tour**—F. R. Libhart, of Chicago, started from the Boston state house Saturday noon on a motor trip that will take him to every state capital before he has finished. He secured a letter from Governor Foss of the Bay State, and having secured it, climbed into a little Metz runabout and headed for Augusta, Me. There he will call on Governor Plaisted and that will be his first endorsement. Governor Bass of New Hampshire will be visited at Concord, then the other New England states, and from there he will go south then west until he has secured the signature of every governor in the country. He has not figured out any definite time for the trip, but he will be gone several months. The plan was arranged by George H. Phelps, of the American Simplex Co., of Boston, who has taken on the Metz for New England.

**Pennsylvania's Big Job**—Pennsylvania has undertaken the greatest road-building contract in history. The state legislature which recently adjourned arranged for the spending of \$50,000,000 as an initial start on a scheme of state highways which will cost when completed \$176,000,000. Furthermore, the state authorities have appointed Edward M. Bigelow, of Pittsburg, as chief engineer to look after the job. His salary will be \$8,000, and he will have under him when the system is in full operation about 28,000 men, including 100 assistant engineers and superintendents, at salaries ranging from \$1,800 to \$7,000 per year. Work on this immense undertaking will be started as soon as the necessary details can be arranged. Most of the roads built will be macadam and brick, and the state motor federation is going to work hard directly in line with Mr. Bigelow toward getting the roads best located

for the motoring interests and see that sufficient road and danger signs are erected in all counties. Within 5 years it will be possible to go from one end of Pennsylvania to the other without the danger or inconvenience of being stuck in 2 feet of mud some 5 or 6 months of the year.

**Just a Starter**—The Automobile Club of Syracuse has just completed its first road construction at a cost of \$50. Complaint was made to the organization that a small stretch of highway near the eastern county line was in sad need of repairs. The club could not induce the county or town officials to do anything, so the club employed men to do the work and paid them, a member donating the use of some teams. It was a marshy stretch of road in which a number of cars belonging to tourists had lately become mired.

**Central New York Improvements**—Motorists in central New York are gratified at improvements now being made in generous portions of Oneida county, which will improve touring conditions materially. Detours are provided for all closed sections, the Utica Automobile Club assisting materially in the arrangements. Jefferson county roads are mostly open, and in the run from Watertown to Alexandria Bay, the Thousand Isles, there are now 17 miles of state road out of 31 miles. A number of new sections of state road are also being built in Oswego county.

**A Philadelphia Idea**—With the advent of hot weather and its subsequent hardships to horses, there was placed in active service by the Woman's Pennsylvania Branch of the Society for the Protection of Cruelty to Animals in Philadelphia this week an electric power truck containing a tank conveying water, baskets, etc., which will daily patrol Market street from the Delaware river to the city hall. Owing to the continual congestion that prevails on Market street, it is impossible to establish permanent watering places for horses, and the new truck will act as a movable station. This modern appliance, the first of its kind in Philadelphia, is equipped with all the necessities for the relief of horses and is operated by two persons.

**Bulldog Hardships**—Telegraphic reports from Dr. Charles G. Percival tell of a terrific duel with adverse road conditions, indulged in by himself and Driver Brown of the Abbott-Detroit Bulldog, now engaged in the task of rolling up a 100,000 mileage. Some distance from El Paso, and in the center of a desert, the mechanism of the car went wrong and the pair were left, 22 miles from a human habitation. Percival set out to walk for help, leaving Brown with the car. The latter followed and when Percival returned had traveled about half way to the village of Clint, Tex., falling unconscious. Assistance had been secured in shape of a squad of United States cavalry. Brown was taken to a house and revived. He had been without water for 2 days and was in a precarious condition.

## In the Realm of the Commercial Car



PIERCE-ARROW TRUCK READY FOR START TO BOSTON

### TEST OF A PIERCE-ARROW

**L**OADED with 5 tons of lubricating oil in barrels a Pierce-Arrow 5-ton truck made a long-distance run from New York to Boston in 20 hours flat, running time. The elapsed time was from 2 o'clock Friday morning to 3 o'clock Saturday afternoon, but between those hours time was taken out for demonstrations of the truck's serviceability at New Haven, Hartford and Springfield and the night was spent at the latter place.

The truck used for the trip was one that had been in use for a month for demonstrating purposes in Chicago, Philadelphia, New York and Newark and on the Monday following the run it was due in Boston. The Standard Oil Co. was interested in the matter of inter-city hauling and a load, consigned to a Boston firm, was secured from it. The schedule of the trip was:

|                         | Running Time     |
|-------------------------|------------------|
| Left New York.....      | 2:05 a. m.       |
| Arrived New Haven....   | 8:27 a. m. 6:22  |
| Left New Haven.....     | 9:30 a. m.       |
| Arrived Hartford.....   | 12:25 p. m. 2:55 |
| Left Hartford.....      | 5:00 p. m.       |
| Arrived Springfield.... | 7:15 p. m. 2:15  |
| Left Springfield.....   | 5:27 a. m.       |
| Arrived Worcester....   | 9:50 a. m. 4:13  |
| Left Worcester.....     | 10:45 a. m.      |
| Arrived Boston.....     | 3:00 p. m. 4:15  |
| Total running time..... | 20:00            |

This would make the average speed for the entire run 12.1 miles per hour, the odometer showing that the distance covered on the road was 242 miles. During the trip 51.5 gallons of gasoline were used, which would give an average mileage of 4.7 miles to the gallon. This would be unfair to the truck, however, as fully 20 miles were covered in demonstrating trips in the cities visited and the motor was al-

lowed to run at least an hour in the different cities where stops were made. As there did not appear to be any means of judging the amount of gasoline used at these times no account was taken of it, and but for this the average mileage would have been higher than 4.7.

In all 6 pints of lubricating oil were used, an average of 40 miles to the pint. No oil was needed for the worm case, as this needs refilling only after 5,000 miles of running or, approximately, twice a year.

The route traveled by the truck was the customary one used between New York and Boston, by way of New Haven, Hartford, Springfield and Worcester. But one detour was necessary, that one being near Stamford, where road repairs were being made. The road between New York and Boston is rolling for almost the entire distance. It is probable that one-third of the distance is down grade, one-third up

grade and the remaining third practically level going.

Incidentally the fact that it was the coasting down grade that enabled the truck to score so high an average of speed should prove an answer to some of the arguments that have been advanced on so many occasions that the worm drive is irreversible. The trip was the first ever made with a worm-driven commercial vehicle in America. Frequently on the down grades the truck coasted at 15 miles per hour. The trip demonstrated that in a case of emergency the truck can be used for inter-city traffic.

### HUB SAYS SEPARATE SHOW

Boston is to have a separate show for commercial vehicles next year. So the Boston Commercial Vehicle Dealers' Association voted a few days ago when a meeting was called to take action upon the reports of various committees. The show



PIERCE-ARROW FINDS THE ROADS GOOD



committee turned in its report, which was to the effect that a separate show was inadvisable and that the trucks should be housed with the pleasure cars as formerly. The committee vote was reached after much consideration and the margin against a show was small. Then the association discussed the report and as a result it was not accepted. The members of the committee against a show stated that it would be a losing venture and any profit to be made would have to accrue from sales. But a number of the members felt that they were willing to take that chance and when the vote on holding a separate show was taken the association went on record for it. The date will follow closely the pleasure car show next March, probably the week following, if Mechanic's building can be secured. This means that there will be much more room for pleasure cars in the show now and there will not be so many agencies left unrepresented, while it also means that it may not be necessary to hire Horticultural hall in addition to Mechanic's building, as the show association was forced to do this year.

#### PHILADELPHIA'S PARADE

A forcible and most convincing demonstration of the adaptability and many varied uses of the motor-driven commercial vehicle in the transportation field was given last Thursday in Philadelphia when over 300 trucks, ranging from mammoth conveyances carrying heavy loads to the smallest and lightest of wagons, with every conceivable type represented between the two extremes, paraded through the principal thoroughfares of Philadelphia, culminating in a monster exhibition of most of the participating vehicles at the Belmont Driving park, Narberth. The occasion was an industrial parade conducted under the auspices of the Philadelphia Inquirer, with the co-operation of the Philadelphia Auto Trade Association.



ROADS TRAVELED OVER BY PIERCE-ARROW TRUCK

Originally conceived with the sole purpose of being an object lesson to show the all-around desirability and usefulness of power-propelled vehicles in the delivery of merchandise and their many advantages over the old horse and wagon system, the demonstration more than fulfilled expectations. It was by far the largest number of commercial cars ever assembled and on display at one time, in Philadelphia at least, and represented over fifty separate makes.

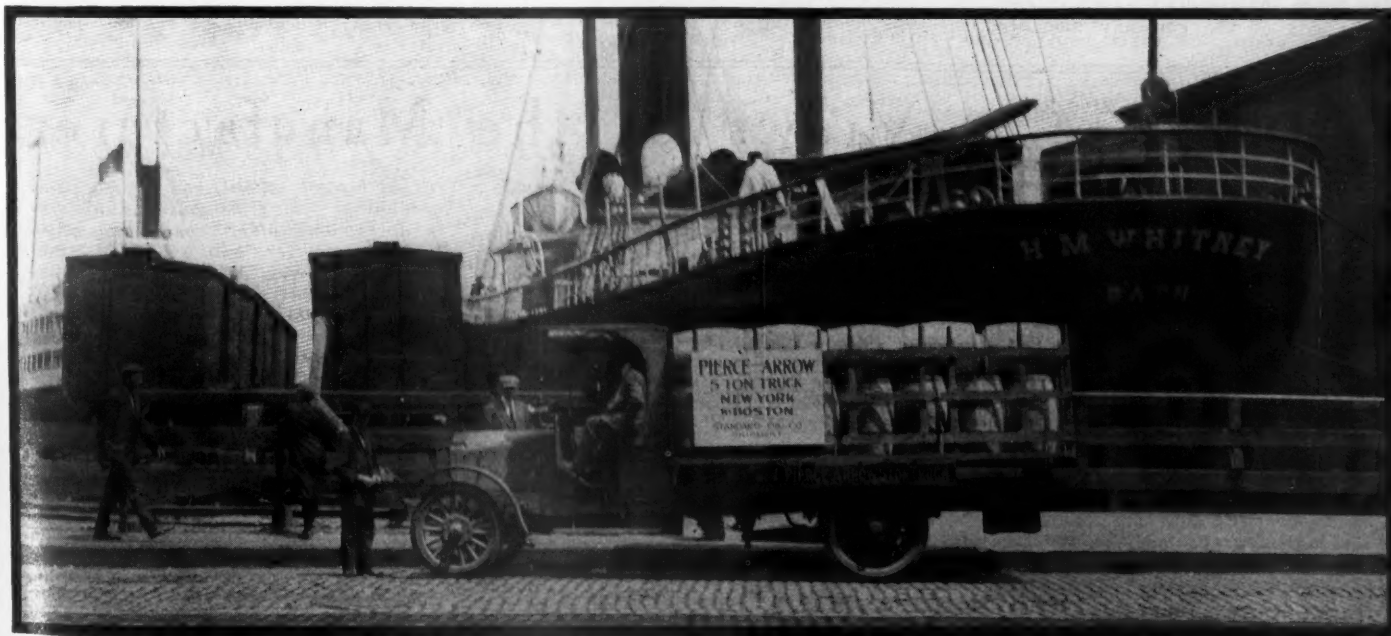
In order not to add further to the congestion of busy Market street, the vehicles were classified according to size, ton-capacity, etc., and formed on Spring, Garden, Fifteenth, Sixteenth and Seventeenth streets early and proceeded to the official starting point in front of the Inquirer building, Eleventh and Market streets, at designated intervals.

Cars were divided into four sections, each division being headed by a brass band seated in huge trucks. The first

division contained trucks having a capacity of 3 tons and over; division No. 2, over 1,500 pounds and less than 3 tons; division No. 3, 1,500 pounds and less; the fourth division was composed of electric vehicles. As a general rule, the cars were those taken temporarily out of active service, to be returned to duty again upon the conclusion of the run. There was a liberal sprinkling of manufacturers' models.

Merchants located along the line of march, many of whom had their trucks in the long line, decorated their places of business with flags and bunting, the principal thoroughfares taking on the appearance of a holiday, and thousands of spectators lined the sidewalks. Progress was necessarily slow through the center of the city, but opportunity was afforded several times to pull out and demonstrate the speed of which the vehicles were capable.

Manufacturers and merchants are a unit in voting the parade and exhibit the most imposing and successful ever held.

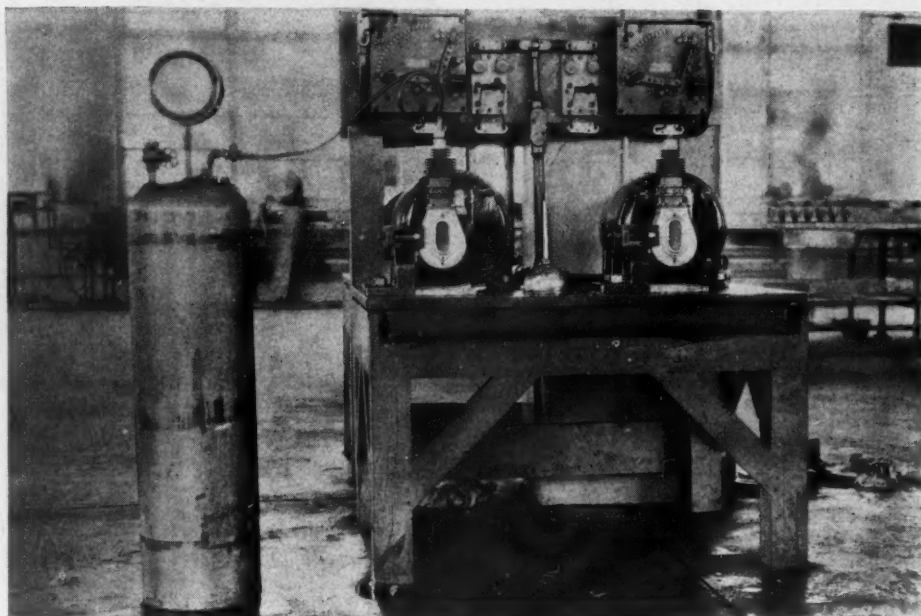


PIERCE-ARROW TRUCK AFTER ITS RUN TO BOSTON

**WILL Make Stutz Car**—A concern to be known as the Ideal Motor Car Co. is being organized in Indianapolis for the purpose of manufacturing the Stutz car. The organization of the company has been quietly under way for a month, and will be completed within the next few days. Arrangements have been made to lease one of the three-story concrete buildings in motor row in Capitol avenue boulevard for factory purposes. A car known as the Stutz was built for the 500-mile international sweepstakes at Indianapolis on Memorial day, the car, driven by Gil Anderson, finishing in eleventh place. The racing car was built by the Stutz Auto Parts Co. In the new organization Harry C. Stutz will be designer and W. D. Myers, now sales manager of the Empire Motor Car Co., will be sales manager for the Stutz. It is the intention to build a chassis similar to that used in the race, with a choice of three types of bodies, a roadster, a four-passenger and a five-passenger fore door.

**Lozier Increases Capitalization**—Stockholders of the Lozier Motor Co. at a meeting June 5 authorized an increase in the company's capital stock from \$2,000,000 to \$3,000,000. The increase authorized consists of \$500,000 in 7 per cent cumulative preferred stock and an equal amount of additional common stock. The latter will not be issued at present. The increase in capital stock is for the purpose of providing capital for an enlargement of manufacturing facilities made necessary through the rapidly increasing demand for the Lozier cars and also for the purpose of bringing out and placing upon the market the new line of Lozier trucks. It was announced at the meeting that the first two samples of heavy duty Lozier trucks would be completed within 6 weeks and deliveries commenced this fall. According to a statement of H. A. Lozier, president of the company, the \$500,000 preferred stock will be secured by assets amounting to over five times that amount. Last August the net assets of the company amounted to

## Among the Makers



TESTING MOTOR-DRIVEN TIRE PUMPS

This illustration shows the means provided at the Pierce-Arrow factory for running-in and testing the motor-driven tire pumps fitted to the Pierce-Arrow cars. The pumps are mounted on specially designed brackets; and gear-driven from individual electric motors, which are neatly arranged on a substantial table with their control switches and starting boxes conveniently placed directly above and behind them. After the bearings are properly run in and adjusted the efficiency of each pump is tested by connecting it up to the large tank at the left. This tank is equipped with a gauge and each pump is required to fill the tank to a certain pressure before it is assembled onto a motor. The time consumed in filling the tank to the required pressure also is taken into consideration, so that the test is a very complete one, as any leaks through castings or past pistons would reduce the efficiency.

\$2,000,000. With the additional capital the company's assets will amount to \$2,500,000. The company's earnings for the last year were more than eight times enough to pay the 7 per cent dividend on the new stock. Mr. Lozier announced that business conditions were very satisfactory. The Detroit plant of the Lozier company is now employing 837 men, which with the

number working at the Plattsburg plant brings the total roster of employees up to about 1,200. The Detroit factory is turning out an average of eighteen cars a week. This weekly output will soon be increased to twenty. It was just 53 weeks since ground was broken for the \$1,000,000 Lozier Detroit plant. The first machinery was installed in October, 1910, and the first

### PACKARD—YEARLY MODELS

**DETROIT, MICH.**—Editor *Motor Age*—Following the announcements of 1912 cars by a number of motor car manufacturers, the question of yearly models has caused a lively discussion in which makers, dealers and owners have displayed a keen interest. In outlining its attitude the Packard Motor Car Co. has decided that the present plan of producing new models annually will be continued. The public is the real judge in this matter and it is accustomed to classifying motor cars by their season rather than by technical changes in construction. The buyer of the latest model does not designate his new car as the one with such and such a feature but as a 1912 car.

Motor cars are manufactured most successfully in quantity, and it follows that their development must be accomplished by changes corresponding to the production of different factory

## Views of the Manufacturers

lots. When the changes are made annually the factory operates to the best advantage by being able to produce an entire season's output that is identical in construction and design. This policy also meets the public's demand for new styles each year.

In advancing the date of our early announcements, the process has been gradual but has followed a well defined plan. In bringing out a new model each year, for twelve successive seasons, we have lapped the calendar, so to speak, by launching the output of each new car about a month in advance of the time its predecessor was introduced.

In this experience, we have learned the advantages of introducing new models at all times of the year and we are settled in our belief that the best time is mid-summer—say July. At that time of the year the weather

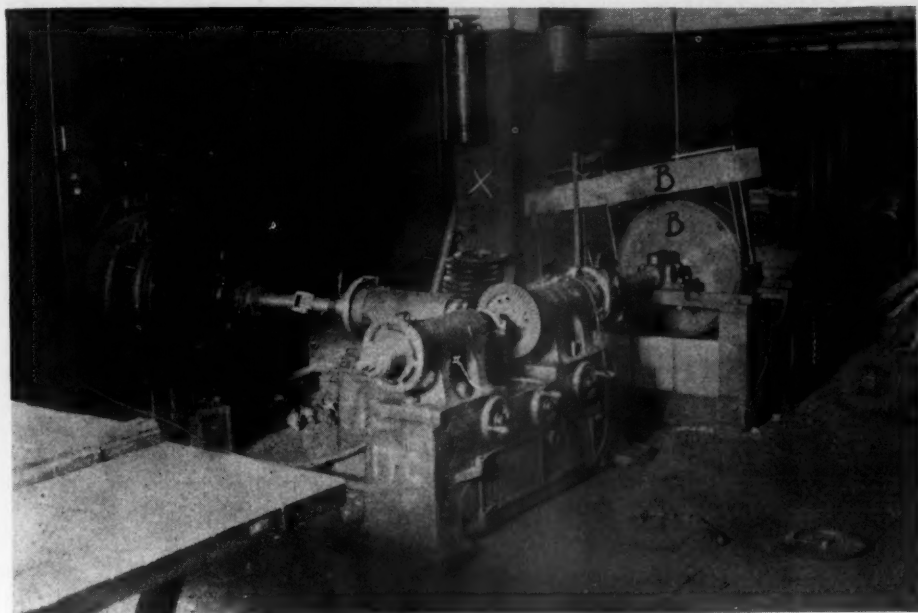
has become settled, and the period is usually free from business disturbances and other conditions which might interfere with sales and deliveries. In fact we are so well convinced of the manufacturing and commercial utility of the annual model and the great desirability of the change being made in mid-summer that we have already made plans for the observance of this plan in our future business.—Packard Motor Car Co., S. D. Waldon, Vice-President.

### THE NATIONAL'S VIEWPOINT

**Indianapolis, Ind.**—Editor *Motor Age*—American motor car manufacturers will do well to follow the popular trend of public opinion in discontinuing the yearly model idea. The motor car has ceased to be a luxury. It has become a stable commodity, with just as much demand as bread,



## and Dealers



FRANKLIN GEAR-TESTING OUTFIT

The above illustration shows the means employed by the Franklin company to match and test for quietness the bevel-driving gears used in the rear axles of Franklin cars. It consists of a specially designed machine into which the driving gears and pinions may be readily adjusted and secured so that they will operate in the same relative positions and under the same conditions that are met when assembled into the rear axle of a car. A large electric motor *M* furnishes the power applied through the gears, and a prony brake *B* provides the resistance. The speed and load may be varied to meet all conditions, and once the gears have been found to run smoothly in this machine the gear and pinion are tied together and sent to the assembling department; thus considerable time is saved and smoother running rear axles assured.

finished cars were turned out of the factory in March.

**Another Ford Addition**—Plans are being prepared for a large addition to the plant of the Ford Motor Car Co. in Highland park, Detroit, immediately east of the present buildings. This is in accordance with an immense general scheme, adopted at the time of the erection of the present plant 3

years ago. The addition will be 865 feet long and will have a width of 74 feet. It will be three stories high and on a general order of architecture similar to that employed in the present building. The structure will, it is hoped, be completed in time for use in the production of 1912 models, although this is doubtful. The exact use to which the new building will be put will

be, it is hinted, a steel stampings works. At present the Ford stampings are made at a plant owned by a firm in Buffalo. It is not denied by the Ford officials that this plant is very likely to be moved to Detroit.

**New Stromberg Branch**—The Stromberg Motor Devices Co., of Chicago, has opened an Indianapolis branch at 214 Penway building, which has been placed in charge of Fred W. Eisele, who for the past 2 years has represented Stromberg carbureters in Ohio and Indiana.

**Big Fire in Chicago**—Fire broke out in the local salesrooms of the Velie Motor Car Co., 1615 South Michigan avenue, Chicago, at 4 o'clock Saturday afternoon, caused, it is said, by some one stepping on a match which ignited waste paper laying on the third floor. The third floor of the building was gutted before the flames were subdued, causing a damage estimated at \$60,000. Seven cars that were stored on the third floor were destroyed, while twenty others on the second floor were damaged by water. Fifteen cars on the first floor were saved.

**Shanks Re-enters Trade**—Charles B. Shanks has decided to re-enter the industry through an alliance he has just made with Wyckoff, Church & Partridge, Inc., of New York City and Kingston, N. Y., American representative for the British Commer, which they also will manufacture at Kingston, together with the new Guy Vaughan car. Not only has he become a stockholder in the company, but he will join its executive force as manager of all the territory west of Denver, with headquarters at San Francisco. Mr. Shanks gave up newspaper work to become in 1898 sales and advertising manager of the Winton Motor Carriage Co. He continued as sales manager for Alexander Winton until 1908, when he went to the F. B. Stearns Co., in the same capacity, remaining with that Cleveland concern for nearly 2 years, when he moved to Portland, Ore., and engaged in the real estate business.

## On Question of Yearly Models

clothing, pianos, or sewing machines. This market is no longer dependent upon the whims of purchasers. In the early days the yearly model idea was very useful, as it showed at once the state of the industry. Epoch-making change in design took place each year. Then it was only fair to the maker and buyer that there should be some system that would indicate these changes. Now, however, there is a very different condition. Wheelbase, horsepower, body lines, and all the other basic ideas that go to make up the modern car have been decided upon by the exhaustive test of daily use and requirements.

The further improvement of the gasoline-propelled vehicle will be more in the nature of refinements than in any very radical change in construction. The progressive maker does not wait for a year to elapse before in-

corporating these improvements that come to his notice. Refinements are added to each lot of cars, as they are made.

It is unfair to the buyer of a car in April to have his car relegated to the has-beens by the appearance of another car in May of the same make, but later date of manufacture, that does not differ from his purchase any more, if as much, as does his own car from those sold in March. Even if this buyer has not moved his car from the garage floor it has lost quite a percentage of its investment value to him.

The present arrangement is beneath the dignity of the industry, especially those makers who have the real interest of its purchasers at heart. The substitution of serial numbers would be just as effective a safeguard to purchasers and would not serve to

decrease the face value of cars already in owners' hands.

Yearly models should be discontinued, at least by those selling service and satisfaction. There is nothing to lose and certainly a great deal for the owners to gain.—National Motor Vehicle Co., George M. Dickson, Secretary and Treasurer.

### REGRETS EARLY MODELS

East Moline, Ill.—Editor *Motor Age*—The writer personally regrets to note the ambition of some of the manufacturers this season to announce their new models so early. I believe it has a very detrimental effect on the trade and is, after all, an unbusiness-like proposition. At the rate they are going, it would not be surprising to have 1913 models announced before the end of the 1911 year. I personally believe that when the manufacturers come to a point where they discard the idea of yearly models entirely the industry will be benefited.—W. H. Van Dervoort, Moline Automobile Co.



# Legal Lights and Side Lights

## FRENCH ABOLISH SPEED LIMITS

ALL speed limits are to be abolished, according to the decision of a plenary commission charged with drawing up a new set of laws and regulations governing traffic on French highways. Strangers probably are under the impression that the speed limit was abolished long ago, for owing to the reasonable way in which the law is applied arrests for exceeding a fixed limit have become almost a thing of the past. The old regulation, however, limiting the speed of motor cars to 18 miles an hour in the open country, except for authorized races, is still in force; further there are numerous local regulations limiting speed to anything from a walking pace to 10 miles an hour. Although the regulations were rarely applied, they constituted a danger to motorists, for in case of an accident caused, or supposed to have been caused, by a motor car, it was only necessary to prove that the latter was exceeding the speed limit to have evidence of culpability. Naturally it was not difficult to prove that a car was going more than 10 miles an hour.

Under the new regulation, which it is expected will go into force at an early date, there will be no speed limit, but every user of the road will be bound to drive with a view to common safety. Every man will be responsible for his own accidents, and in determining responsibility the mere fact of having exceeded a certain speed will not be taken into account. The plan certainly will be satisfactory and will give all guarantees to other road users, for it is the arrangement which has been in force in Paris for several years. The instructions to the metropolitan police are not to arrest for speeding, but to put down reckless driving. Thus, unless the pace is likely to endanger other road users, no action is taken by the police. Under the new law this system will be in vogue all over France.

## THE TROUBLE IN DETROIT

Motorists of Detroit continue their assaults on the recent radical traffic law passed by the council. Two meetings have been held at which these protests were placed before the council's committee in a formal way. There are now nearly 2,000 complaints in the recorder's court against motorists who have violated the provisions of the law. The great majority of these cases are technical and many are based on the clause making it obligatory for a motorist to come to a full stop before crossing a street car track. At present it looks as if the council may amend this portion of the ordinance, as it has drawn a fire of protest and is designed to protect merely motorists themselves. On the other hand, it has been noticeable that since the law

went into effect the almost continual series of fatal accidents has suddenly stopped.

The congestion of traffic on the main streets—those with car lines—has noticeably decreased. Even in the outlying districts better conditions seem to prevail. Conditions also have been improved by the action of several factories which have started the testing of cars on the street at night. The testers make up a large share of the motorists in the residence districts of the city and have been prominent in Detroit's long record of fatalities in which motor cars have played parts.

## RIGHTS OF A COW

Because a cow owned by one of the members was knocked down by a motor car and sustained a broken leg, West Brandywine Grange, Patrons of Husbandry, which has its headquarters in Talleyville, Del., devoted the major portion of its recent meeting to an effort to ascertain whether there is any law referring to the driving of cows on the highways which would enable the owner of the cow to collect, but it found that there was no law and the matter was dropped.

## THIBODEAU'S INTERPRETATION

William A. Thibodeau, chief counsel for the Automobile Legal Association, which won the victory before the Massachusetts supreme court recently on speeding, has written the following relative to the decision, which clears up the matter very well:

"The recent decision does not change the law nor remove the statutory restrictions on the speed at which motor vehicles may be operated," he writes. "It establishes a new rule of construction which the legislature intended the law should have when it was framed, but unfortunately not considered by police officers working speed traps nor adopted by a good many courts in deciding speed cases.

"The decision should teach 'a rule of reason' to the country constable or officer who has been wont to prey upon the unwary motorist because he has exceeded the speed limit by inculcating in him that the determining elements of the offence are the surrounding conditions in the highway—the traffic, the character and use of the highway, etc., rather than the particular rate of speed of the machine. It is pointed out to them that dangerous driving and fast driving are not necessarily the same thing, and that the purpose of the law is to punish the dangerous operator.

"The courts likewise have a clearer guiding rule of interpretation, and hereafter less stress will be placed upon the

speed and more stress upon the surrounding conditions in adjudging over-speeding cases. The law permits any safe speed, however fast, and forbids any dangerous speed, however slow.

"Motorists should remember, however, that the decision does not relax the rule of the metropolitan park commission, which limits the speed of motor vehicles to 20 miles an hour. This limit is an absolute and inflexible one. The statute expressly excepts from the operation of its speed provisions the rules adopted and enforced by that board. So that the motorist cannot gage his speed upon the metropolitan park system according to the 'traffic, the use of the way or the safety of the public,' but is required to keep down to the fixed, arbitrary limit prescribed.

"The decision has by no means sounded the death knell of traps, as at first seemed to indicate. This mode of prosecution will doubtless continue, but in a manner and according to a plan which will discriminate between the fast and the dangerous driver.

"On the whole there has been a distinct gain. But if motorists are to keep the ground won they must not gloat over their victory nor permit any spirit of indifference on the part of the irresponsible few to jeopardize the advantage thus acquired. The supreme court has spoken in a liberal tone; and it is now up to the motorists to determine whether the law shall endure, as interpreted, or whether, through the arrogance or indifference of a few, it shall be superseded by enactments which will reinaugurate the reign of indiscriminate prosecution and oppressive persecution."

## CHANGE IN WISCONSIN

The Wisconsin assembly has adopted substitute 3A to the Biehler bill, licensing motor vehicles and cycles. The revised measure provides for a flat annual license fee of \$5 for cars and \$2 for motor cycles, instead of gauging the fee by horsepower with a minimum of \$5. It is provided that three-fourths of the license money shall go into the state highway fund for pro rata distribution among counties. The measure provides a speed limit of 15 miles per hour in cities and 25 miles an hour in the country. The present city limit is 12 miles per hour. Two license plates will be required, instead of one as at present, one to be displayed in the front and the other in the rear. One-fourth of the license money, or as much as necessary, shall be paid as salary to a clerk in the office of the secretary of state, who shall be in charge of the licensing and registration department. There are at present licensed in Wisconsin 20,000 cars.





# Brief Business Announcements



**KEARNEY, ILL.**—B. R. Noyes is now located at 2014 First avenue, with a garage.

**Hartford, Conn.**—Kilby & Barrett have been appointed local agents for the Matheson.

**Oklahoma City, Okla.**—Charles Barrett has the state of Oklahoma as his territory to sell the Pierce-Arrow cars.

**Davenport, Ia.**—The J. W. Buck Motor Car Co. has taken out a building permit for the erection of a new garage to cost \$12,000.

**Atlanta, Ga.**—The Consolidated Motor Car Co., of Atlanta, was organized several weeks ago, with an authorized capital of \$100,000.

**Oklahoma City, Okla.**—The Buick Motor Car Co. will move to its new quarters, 506 and 508 North Broadway, as soon as the building is completed, which will be about July 15.

**Oklahoma City, Okla.**—H. B. Sawyer, formerly of the Franklin Square garage, Worcester, Mass., is now connected with the Smith-Rolf Co. of this city, agent for the Cadillac.

**Menominee, Mich.**—C. M. Dalrymple, of Menominee, Mich., has been appointed agent for the Regal in Marinette, Wis., Menominee, and other territory in north-eastern Wisconsin and the upper peninsula.

**Racine, Wis.**—George West, formerly a well known resident of Racine, Wis., and now located at Mankato, Minn., is endeavoring to induce his firm, the Four Wheel Traction Auto Co., to move to Racine.

**Waukesha, Wis.**—The R. L. Kenyon Co., manufacturing seat covers, cushions, etc., has filed an amendment increasing the capitalization from \$50,000 to \$100,000. The company recently moved its plant from LaCrosse, Wis., to Waukesha.

**Sheboygan, Wis.**—The Lake Shore Tire Repair Co. has been organized at Sheboygan and has opened for business in one of the former Milier piano factory buildings. A. M. Scheurer, of Kiel, Wis., is manager. Mr. Scheurer is the inventor of a new vulcanizing process.

**Beloit, Wis.**—A. A. Goldberg has established a factory at Beloit for the manufacture of a brass, nickel and silver polish. The process is a new one and the result of several years of experimentation by Mr. Goldberg, who has been connected with the motor car industry there.

**Fort Worth, Tex.**—The Allen Motor Car Co. and the Vernon Motor Car Co. have consolidated under the firm name of the Allen-Vernon Motor Car Co. and will occupy the new garage building now under construction at Eleventh and Commerce streets. The firm will also have headquarters in Dallas at 2025-27 Commerce

street. The new firm will handle Packard cars and trucks, Rauch & Lang electrics, and Cadillac cars.

**Hartford, Conn.**—E. W. Clark has secured the local agency of the Paige-Detroit.

**Hartford, Conn.**—Russell P. Taber, agent for the Reo, has added the Owen car to his agency list.

**Seattle, Wash.**—James C. Murray, Seattle agent for the Hudson 30 and the Grabrowsky truck, has recently added to his selling stock the Hupp-Yeats electric.

**Tampa, Fla.**—Active preparations toward the completion of the new Ferman garage are being put forward and all equipment will be installed shortly.

**Louisville, Ky.**—The Keeler Co., organized to engage in the business of repairing motor cars, filed articles of incorporation in the office of the county clerk, with a capital stock of \$8,000.

**Detroit, Mich.**—The Thompson Automobile Co., Michigan distributor of the King, has taken on the Universal, Federal and Van Dyke trucks, each designed for a special and different purpose.

**Sacramento, Cal.**—William Reeder & Co. have moved their garage and machine shop from the old location at 1112 J street to 1315 J street. The firm handles the Brush cars in this city.

**Boston, Mass.**—Jack Wade, a former Boston motor writer who was with the Grout company at Orange, has resigned to accept a position with the Butler Motor Car Co. of Boston, selling Rapid trucks.

**Birmingham, Ala.**—Papers of incorporation have been filed in the probate court by the Birmingham Automobile Co., with an authorized capital stock of \$2,000. Headquarters will be in Birmingham, and a general motor car business will be conducted.

**Spokane, Wash.**—The Spokane branch of the Packard Motor Car Co., Edward B. Zane, manager, has completed a new one-story California mission garage, 50 by 150 feet. A feature of the garage and workshop is that no post obstructs the passage of man or vehicle.

**Chicago**—Clifford Edwards, who for the past two seasons has traveled in the South and Southwest for the E. R. Thomas Motor Car Co., has joined the sales force of the Woods Motor Vehicle Co. and will place agencies through the southern states, making headquarters at Atlanta, Ga.

**Houston, Tex.**—The Commercial Motor Car Co., of San Antonio, capitalized for \$100,000, after looking over the entire state has decided that South Houston is the most suitable place for the manufacture of motor trucks. It has closed a deal for the outright purchase of a manufac-

turing site in South Houston, and machinery, full equipment, etc., will be shipped at once.

**Seattle, Wash.**—The Osen & Hunter Auto Co., Seattle agent for the Mitchell, have moved from 604 East Pike street to larger quarters at Broadway and Pike streets.

**Moline, Ill.**—License to incorporate has been issued to the Black Hawk Motor Co., of East Moline; capital stock, \$50,000; object, manufacturing and dealing in motors, motor cycles and motor parts. Incorporators: Ross M. Goulds, H. S. Dickinson, Moline; Ardo W. Mitchell, Rock Island.

**Oklahoma City, Okla.**—The secretary of state has issued a charter to the Barrett Motor Car Co. of Oklahoma City. The capital is \$4,000 and the incorporators are C. E. Barrett and M. K. Cruce, of Oklahoma City, F. S. Dey and H. H. Embry, of Kansas City, Mo., and H. B. Johnson, of Chickasha, Okla.

**Oklahoma City, Okla.**—Clarence H. Stoke, formerly of the Studebaker company, has been appointed permanent manager of the E-M-F interests in this city. John Yoke, who has been acting as temporary manager of the E-M-F Oklahoma City Co., will return to Detroit after visiting the Dallas branch.

**Milwaukee, Wis.**—George W. Browne, 134-136 Oneida street, factory distributor for Wisconsin of the Overland, Marion and Marmon, has been appointed Wisconsin representative of the National. The Milwaukee agency will be in the hands of the Motor Car Sales Co., 134-136 Oneida street, T. C. McMillan, manager.

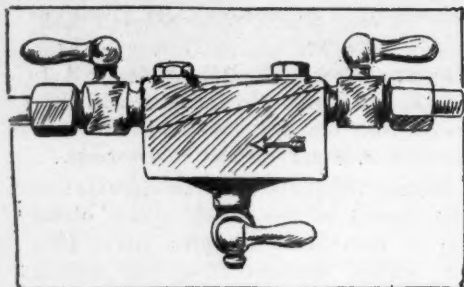
**Cincinnati, O.**—The Cadillac Motor Sales Co., of Cincinnati, has been incorporated with a capital of \$25,000 to buy, sell and deal in motor cars and motor trucks, accessories and supplies and to operate a garage. The incorporators are Thomas B. Strack, Carrie L. Strechley, Edwin O. Strechley, Emma S. Miller and David R. Schorr.

**Detroit, Mich.**—The Rapid Motor Vehicle Co., of Pontiac, has made a change in its local representation, J. C. Ayers, an experienced truck salesman, having been appointed manager of the firm's Detroit store. Mr. Ayers was formerly with the Rapid factory, and was before that a salesman of the Burroughs Adding Machine Co.

**Kansas City, Mo.**—J. Frank Witmer, assistant district manager for the Studebaker, has organized the Witmar Motor Car Co. and will handle the Garford and Marion gasoline cars and the Ohio electric. The temporary quarters of the company are at 1542 Grand avenue, but a new building is being erected at 1808-10 Grand avenue.



# Development Briefs



THE SHURECLEEN STRAINER

## Hartman Lighting Switch

THE Hartman Electrical Mfg. Co., of Mansfield, Ohio, has brought out a new type of dash switch for controlling the various lighting circuits. This switch can be used with a straight storage battery as well as with the generator system, for which it was designed. The switch is of the selective drum type, giving five combinations, viz., tail, tail and side, all lights with headlight dim, all lights bright, and head and tail, the last named being for city driving where full illumination is not necessary.

By means of a resistance coil, which is a part of the switch, the headlight can be dimmed for city driving or when approaching another car. The switch proper is on the engine side of the dash, where connections with the various lighting circuits can be made easily. This switch requires only a  $\frac{5}{8}$ -inch hole for the stem, which is threaded far enough so that the switch can be mounted on either a metal or wood dash. It is held in place by means of hexagon nuts on either side and the work of installing requires only a few minutes. The dial which appears on the front of the dash is  $2\frac{1}{4}$  inches in diameter. The switch handle is made removable, so that when the driver leaves the car he can turn off the lights or leave them burn in any combination, with the assurance that they will not be tampered with during his absence. The switch is furnished either with or without socket for trouble lamp. The trouble lamp is a temporary connection for work about the car.

## Michener Chain Carbon-Remover

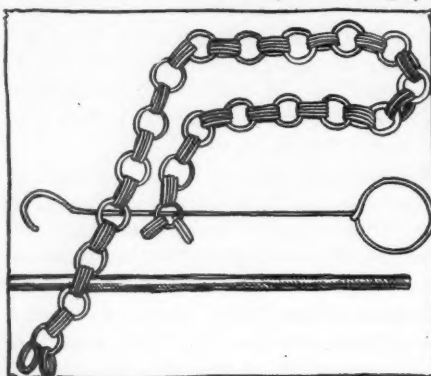
Among the many compounds and devices on the market for removing the accumulated carbon in the cylinders of motors, the arrangement brought out by E. S. Michener, of New Castle, Pa., is one of the most ingenious. This, as shown in the illustration, consists merely of a very flexible chain made up of small round links. This is poked through the spark-plug hole of the cylinder to be treated and a little kerosene injected. The spark plug is then replaced, but disconnected, and the motor is run on the remaining cylinders for about three minutes at a medium rate of speed. The spark plug

is again removed and the chain fished out by means of the wire hook.

This device saves the expense of tearing down the motor, as is required for scraping, and it is claimed that the chain does not scratch or nick the metal as a sharp tool is liable to do. The action is simply that of allowing the piston to throw the chain about in the cylinder, and the striking of the chain upon the piston head and the top and sides of the cylinder tends to scour off all the deposits, the loose particles being carried off through the exhaust. The remover is applicable to all four-cycle poppet-valve vertical motors of two or more cylinders.

## Snaddon Spark Plugs

A spark plug which is designed with a view to providing a plug which permits of easy attachment and detachment of the terminal wires is made by the Bingham



MICHENER CHAIN CARBON REMOVER

Mfg. Co., Cleveland, O. As the name indicates, the plug is provided with a terminal attached to the high-tension wire, which snaps firmly into position on the plug. At the same time means are provided of removing the plug from the cylinder head without necessarily detaching the lead.

The terminal consists of an outer insulating sleeve, positive electrode and an internal bushing. The bushing is made up of a boss surrounding steel balls which are held in place by springs. The springs press the balls partially through an opening in the boss and when slipped over the positive electrode the balls are always compressing into a groove in it.

## Shurecleen Strainer

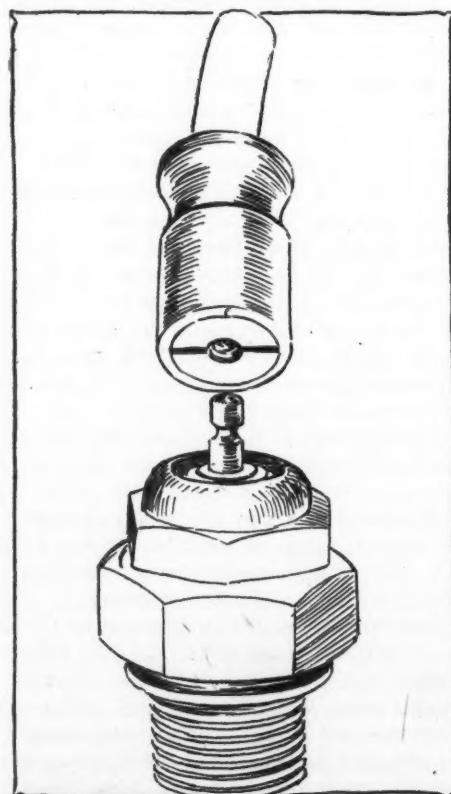
The Bingham Mfg. Co., of Cleveland, O., is marketing a strainer to be placed in the gasoline line between the tank and the carbureter. The illustration shows its general appearance. It will be noticed that the strainer is provided with three cocks in place of the single cock found at the bottom of most devices for the purpose. One of these is for shutting off the gasoline between the tank and the strainer, the second for closing off the flow from

the strainer to the carbureter and the third at the bottom for flushing the strainer. With the additional cocks the testing of the gasoline line and the location of obstructions in it or the carbureter is made easier.

## Vacuum Bottle for Solids

Many motorists have wondered why heat retaining bottles were not made larger than one quart. The reason is a structural one. Until recently a satisfactory vacuum for the purpose could be produced only in glass. As the atmospheric pressure of 15 pounds to the square inch gives a total pressure of 4,840 pounds on the surfaces of a quart bottle, it can readily be appreciated that the increased pressure which would result were the bottle made larger would be more than the fragile material could stand. In fact, many users have discovered that even in smaller glass bottles the heavy air pressure coupled with a jar sometimes causes breakage.

In a bottle called the Vac-Jac Magnum, a metal vacuum jacket surrounds a glass bottle which holds two quarts. There is no glass under pressure and little chance for breakage. The bottle is designed to meet the ordinary requirements of touring, and will keep its contents hot for 10 hours. A feature of special advantage to its user is the wide mouth of the bottle insert, which allows the storage of solid foods as well as liquids. It is made by the Vacuum Insulating Co., Chicago.



SNADDON SPARK PLUG